

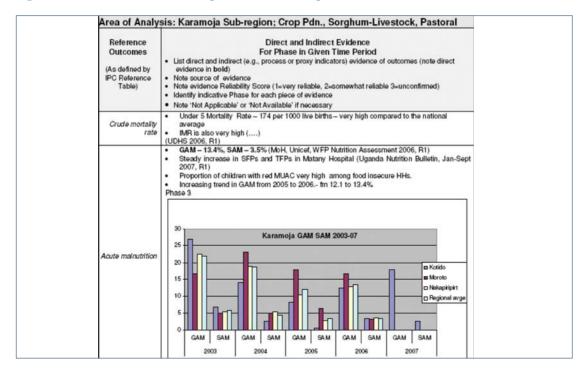
2.1 Objective of the Module and What You Will Be Able to Do When You Have Completed It

- **Objective:** to guide you in making your judgement on phase classification based upon a sound analysis of your data
- You will be able to:
 - o Analyse your direct and indirect evidence and assign phases indicator by indicator
 - o Put all your evidence together an analyse the convergence of evidence
 - o Make a final phase classification and assign a confidence score

2.2 What You Need

- ✓ The right people around the table: it is important to get technical consensus while doing a classification (see also *Module 8*: How to Establish the IPC in Your Country)
- ✓ Completed evidence template part 1 column 2

Figure 2.1: Columns 1 and 2 of a Completed Evidence Template (Part 1)



- ✓ Section 4.2 of the Technical Manual, Key Reference Outcomes (P.20-32)
- ✓ The reference table, with a focus on the phases and reference outcome indicators (see page 4 of the Technical Manual)

Figure 2.2: IPC Reference Table

	Phase Classification	Current or imminent outcomes or than absolute	Key Reference Outcomes n lives and livelihoods. Based on convergence of direct and indirect evidence rather thresholds. Not all indicators must be present for classification
1	Generally Food Secure	Crude Mortality Rate Acute Malnutrition Stunting Food Access/ Availability Dietary Diversity Water Access/Avail. Hazards Civil Security Livelihood Assets	< 0.5 / 10,000 / day <3 % (w/h <-2 z-scores) <20% (h/age <-2 z-scores) usually adequate (> 2,100 kcal ppp day), stable consistent quality and quantity of diversity usually adequate (> 15 litres ppp day), stable moderate to low probability and vulnerability prevailing and structural peace generally sustainable utilization (of 6 capitals)
2	Moderately/ Borderline Food Insecure	Crude Mortality Rate Acute Malnutrition Stunting Food Access/ Availability Dietary Diversity Water Access/Avail. Hazards Civil Security Coping Livelihood Assets	<0.5/10,000/day; U5MR<1/10,000/day >3% but <10 % (w/h <-2 z-score), usual range, stable >20% (h/age <-2 z-scores) borderline adequate (2,100 kcal ppp day); unstable chronic dietary diversity deficit borderline adequate (15 litres ppp day); unstable recurrent, with high livelihood vulnerability Unstable; disruptive tension 'insurance strategies' stressed and unsustainable utilization (of 6 capitals) Pronounced underlying hindrances to food security
3	Acute Food and Livelihood Crisis	Crude Mortality Rate Acute Malnutrition Disease Food Access/ Availability Dietary Diversity Water Access/Avail. Destitution/Displacement Civil Security Coping Livelihood Assets	0.5-1 /10,000/day, U5MR 1-2/10,000/dy 10-15 % (w/h <-2 z-score), > than usual, increasing epidemic; increasing lack of entitlement; 2,100 kcal ppp day via asset stripping acute dietary diversity deficit 7.5-15 litres ppp day, accessed via asset stripping emerging; diffuse limited spread, low intensity conflict 'crisis strategies'; CSI > than reference; increasing accelerated and critical depletion or loss of access
4	Humanitarian Emergency	Crude Mortality Rate Acute Malnutrition Disease Food Access/ Availability Dietary Diversity Water Access/Avail. Destitution/Displacement Civil Security Coping Livelihood Assets	1-2 / 10,000 / day, >2x reference rate, increasing; U5MR > 2/10,000/day >15 % (w/h <-2 z-score), > than usual, increasing Pandemic severe entitlement gap; unable to meet 2,100 kcal ppp day Regularly 3 or fewer main food groups consumed < 7.5 litres ppp day (human usage only) concentrated; increasing widespread, high intensity conflict 'distress strategies'; CSI significantly > than reference near complete & irreversible depletion or loss of access
5	Famine / Humanitarian Catastrophe	Crude Mortality Rate Acute Malnutrition Disease Food Access/ Availability Water Access/Avail. Destitution/Displacement Civil Security Livelihood Assets	> 2/10,000 /day (example: 6,000 /1,000,000 /30 days) > 30 % (w/h <-2 z-score) Pandemic extreme entitlement gap; much below 2,100 kcal ppp day < 4 litres ppp day (human usage only) large scale, concentrated widespread, high intensity conflict effectively complete loss; collapse

3.3 Before You Start...

Once you have entered all of your data and evidence into column 2 of the Part 1 template, you are ready to do the **phase classification.** The key to this is the concept of 'convergence of evidence' whereby the classification is done on the basis of all the available evidence, using the reference outcomes as a guide, and not considering any one indicator or piece of evidence as more important than an other. This is really important, because you are dealing with a situation that is highly complex with a bewildering number of variables, which means that your local knowledge is also very important.

"Essentially what we are doing here is making a best judgement of the situation based upon the available data in combination with our understanding of the context."

This sounds difficult, but in practice is rarely problematic because generally speaking our evidence tends to point in the same direction and leads us to make conclusions that are self-evident. One thing that can happen is that one particular indicator will be out of synch with the others leading us to question either the reliability of the data, or the possible reasons why that piece of information seems to be telling a different story to the rest.

A good example of this comes from Southern Sudan, where persistent high levels of acute malnutrition (w/h) are recorded in areas where other food security indicators suggest that the situation is reasonable good (usually phase 2). Debate on this quickly unearths that the cause of the high malnutrition is not directly related to food access or availability, but rather is an outcome of poor water quality combined with poor child care practices.

The point here is that the one reference outcome (acute malnutrition in this case) should not be the sole evidence that is used to classify the area, even if it is reliable and above an emergency threshold. In this particular case, our southern Sudanese colleagues classified the area as phase 2 as all the other evidence supported this phase, but flagged the issue of high malnutrition and its causes in the text statements describing the situation analysis. Note also here that this is a good example of the kind of debate that the IPC process encourages.

Another key issue to explain before you go on with your classification is known as 'masking'. This is where humanitarian aid is having a positive impact on the outcome indictors, and in a sense, obscuring the underlying situation. The effect of humanitarian assistance is most easily measured in a controlled situation such as a camp, where accurate data is available on relief items such as food aid, water, health facilities etc and the camp population have little or no access to other resource. This becomes increasingly difficult to measure in large populations who are not displaced, and particularly when relief assistance becomes less significant, making it impossible to project the underlying IPC phase.

A good example of this comes from Darfur, where people displaced from conflict are almost entirely dependant upon relief supplies. Even in cases like this, your classification should be done on what evidence is available; otherwise the whole essence of the IPC will be undermined. This is a bit controversial, because if you classify a situation in a non-crisis phase it might send the message to humanitarian decision makers that the relief is no longer needed, when we know that the situation is very likely to become a crisis if that happened. So, while it is important to base the classification on the evidence, it is also essential to send the right message to decision makers: in this example, "the relief effort has been successful in improving most outcome indicators to non-crisis levels, however, the IDPs are wholly dependant upon relief supplies, which must continue if the affected population are not to slide into either IPC phase 3, 4 or 5." In addition, the presence of relief assistance should be recorded and accounted for in your evidence template; for example, food aid would be documented under food access and availability. Keep in mind that assistance can be an important part of the overall food security picture. At the moment, masking is not adequately covered with the mapping protocols, making written statements very important. However, this issue has been recognised and there are efforts being made at regional and global levels to develop a new mapping symbol to illustrate where masking is having an effect.

2.4 Step 1: Classifying Each Indicator in Turn

There is no one way of doing the classification, but it is first best to classify the phases of each individual reference outcome/evidence in order to be able to see any convergence of evidence clearly. It is important here to refer to Section 4.2 Key Reference Outcomes in the Technical Manual to classify each outcome – there is a lot of information and guidance for assigning phases here, and it is not the purpose of this user guide to replicate. When doing the classification of each indicator there are a few things to remember which may help the process:

1. Phases should be *current or imminent, and have a period of validity*. This is important, because we generally want to provide 'decision makers' with a situation analysis that is dynamic and forward looking, rather than be static and stuck in time. As mentioned in the previous module, the IPC outcome should have a clearly defined period of validity. So, while you are classifying each indicator, you need to be thinking about it in the present 'what is going on now', as well as what is foreseeable within the validity period of the analysis 'what I am sure is going to happen'.

The period of validity will vary from country to country as it is usually tied in with agro-climatic seasons and the associated agricultural calendar. Typically an IPC analysis will take place at or near the end of a rainy season, and its validity will extend to a similar stage in the next rainy season. In some cases it may be appropriate to do a mid-season outlook, which may not be a 'full' IPC analysis, but has value in providing decision makers with an early warning of the season's performance (more on this in Step 2).

2. Direct and Indirect Evidence: As mentioned in the previous module, you will have a mixture of direct and indirect evidence, and in most cases due to scarceness of data, you will most likely have much more indirect than direct evidence. This is not a problem, but you have to think about the way you interpret each kind of data. The simplest kinds of data to classify in the IPC are reliable quantitative data that directly relate to an outcome indicator that has a recognised threshold. Indicators like acute malnutrition and mortality would fall into this group. Other direct evidence may not be quantitative or do not have a threshold, and are classified on the basis of a description that is as specific as possible. Examples of these kinds of evidence would include civil security, disease, destitution/displacement and livelihood assets. While these may be imprecise to a greater or lesser extent, the evidence still describes the situation directly.

Indirect evidence describes a given reference outcome through proxy or process indicators that are, by definition, indirect. Because of this, **it** is **for you to make the appropriate association between your indirect evidence and a particular reference outcome**, taking into account the livelihood context and relationships with other factors. Therefore, it is really important to interpret each piece of indirect evidence with a good understanding of how it relates to the outcome for specific livelihoods/communities.

BOX '

When looking at access to food, cereal and livestock prices are often used as indirect evidence. But these will affect different people in different ways: rapidly increasing cereal prices together with declining livestock prices can be interpreted to be eroding the terms of trade for pastoralists for example, but may be seen as advantageous to crop producers who may see more income from selling their surplus cereal.

3. Confidence: When people – especially food security analysts - first see the IPC tool, they often get worried that they will not have enough data to do a classification. It does look a bit scary.... but in practice it is possible to do a classification on the basis of scanty data. It should be obvious that the confidence you have of a classification will not be as high as it would if the data was more complete or of higher quality, but it is still possible to do. If you are worried about this, then think about the fact that decisions will be made on food security issues on the available evidence (or on no evidence at all) – it is surely better to inform decision makers through the systematic analysis of the data that does exist.

It is important to tell the end users of the IPC output about how confident you are in the final classification.

As you classify each reference outcome, you need to develop a relative scale that you can use to tell people about your confidence.

This is a product of three things:

- a) The reliability of evidence (you should already have scored each piece of evidence in terms of reliability as you entered the data into the template):
- b) The amount of evidence and how consistent it is clearly one piece of evidence is less convincing than two or three pieces from different sources which corroborate themselves;
- c) The strength of the evidence in indicating a reference outcome.

Once you have classified all the reference outcomes, you can go to the next step

2.5 Step 2: Convergence of Evidence and Overall Classification

As mentioned in section 2.3, the important concept here is **convergence of evidence**, or in other words, what collective story your indicators are telling you.

Using an example from Southern Sudan, the following table (Figure 2.3) is a useful tool for summarising the phase classification of each reference outcome, allowing the convergence of evidence to be seen clearly. Note that here the acute malnutrition outcome was in phase 3 (as previously discussed), but the overall phase assigned was phase 2.

This table just gives you a summary or global view of the detailed template with all your evidence, and as such should be seen as a guide to help you with the phase classification. It is useful to work out the mode – or the most popular phase – to help with your judgement, but this is only a guide and not mathematical process.

Figure 2.3: IPC Classification Summary Table – with Data from the Western Flood Plans Livelihood Zone of Southern Sudan

Key Reference Outcome	Confidence (1, 2 or 3)	Classification* (1-5)
CMR	2	1
Acute Malnutrition	2	3
Stunting	-	-
Disease	2	2
Food access/ availability	2	2
Dietary Diversity	1	2
Water access/ availability	2	2
Hazards	2	2
Civil security	2	2
Coping	1	2
Livelihood Assets	2	2
Structural	2	2
SYNTHESIS	2	2

^{*}GFS=1; M/BFI=2; AFLC=3; HE=4; FHC=5

Generally, your classification will be made on the basis of the *most vulnerable* in the area or LZ³. We know that not all people will be affected by the hazard in the same way: in most cases, asset poor people are most affected, and some people may even benefit. What you want to communicate is also important. For example if a relatively small proportion of the population is in a serious crisis and need urgent help, it is important to classify the whole area on the basis of that vulnerable population. In *Module 4*, we discuss how to present the different estimated populations that may be in different phases within an overall phase classification to communicate the nature of the food insecurity.

Indicators are not weighted in the IPC, and so in theory at least, each indicator is equally important as another. However, in practice we generally do introduce a degree of weighting on the basis of our local knowledge. If we know for example that a particular issue is central to a food security problem, such as access to food as a result of hyperinflation, you would be justified in giving that indicator more weight than one that you know is not so important. At the end of the day, it is for you to make the best judgement that you can base upon the evidence that is available and your own knowledge.

In a similar way to Step 1, your classification should incorporate what is current and emerging – the 'now' and the 'foreseeable' during the specified validity of the analysis. As mentioned before, typically an IPC analysis will take place at or near the end of a rainy season, and its validity will extend to a similar stage in the next rainy season. In some cases it may be appropriate to do a mid-season outlook, which may not be a 'full' IPC analysis, but has value in providing decision makers with an early warning of the performance of the season.

An analysis may have to be done in a more ad hoc reactive way, if for instance a sudden hazard occurs such as an earthquake or conflict. Note that the early warning component of the IPC deals with the probability of a phase deteriorating to a worse phase during the period of validity. This is different from the emerging where we are communicating the situation that is imminent and certain to develop (*see Module 3: Risk Analysis*). Note that the current / emergent phase that you decide on will communicate both the situation and inform decision makers on the kind of responses that may be appropriate, so this is a really important aspect of the analysis.

Once you have come up with a phase, it can be helpful to check it against the General Phase Description table on P. 19 of the Technical Manual (see Figure 2.5) to see how your judgment fits with the general description, though these descriptions may not be appropriate in all cases.

Figure 2.4: IPC General Phase Description Table

	Phase	General Description
1	Generally Food Secure	Usually adequate and stable food access with moderate to low risk of sliding into Phase 3, 4, or 5.
2	Moderately/ Borderline Food Insecure	Borderline adequate food access with recurrent high risk (due to probable hazard events and high vulnerability) of sliding into Phase 3, 4, or 5.
3	Acute Food and Livelihood Crisis	Highly stressed and critical lack of food access with high and above usual malnutrition and accelerated depletion of livelihood assets that, if continued, will slide the population into Phase 4 or 5 and/or likely result in chronic poverty.
4	Humanitarian Emergency	Severe lack of food access with excess mortality, very high and increasing malnutrition, and irreversible livelihood asset stripping
5	Famine / Humanitarian Catastrophe	Extreme social upheaval with complete lack of food access and/or other basic needs where mass starvation, death, and displacement are evident

This area is being discussed at national, regional and global levels in the interests of refining the IPC and providing more detailed guidelines for application.

Coming up with a confidence score follows the same process as in Step 1, only you need to ascribe a score for your overall classification. The summary table (Figure 2.3) will help with this process, but again, the purpose is to give an overview of your confidence ratings for each reference outcome rather than a mathematical process. As in the previous step, the **main** considerations are the *reliability of the data*, the *comprehensiveness of the evidence* and the *strength of the evidence* in indicating a phase. There is no one way of doing this, but keep in mind that you want to transparently communicate to decision makers how confident you (and your colleagues) are about the phase you have assigned.

Right at the beginning of this module, under section 1.2 'what you will need' the first bullet says 'get the right people around the table'. This is really important because the convergence of evidence approach has the underlying assumption that two analysts with the same information and comparable local knowledge will make the same phase classification judgement.

Having the 'right' people around the table will really help to get lots of input from different perspectives, and build consensus over the judgment of the phase. So who are the 'right' people'? This is dealt with in *Module 8*, but in summary the group of people who do the analysis would normally be from a technical level with a cross section of skills in the food security spectrum (including health, water, nutrition... etc); from key stakeholders, including government, UN, NGOs and international organisations such as the Red Cross Movement and technical projects like FEWSNET; have a mixture of nationally based and field based people to ensure that local knowledge is built into the equation.

Typically, an analysis event will be split into groups of 5 or 6 people who fill in a number of templates covering distinct groups (as defined at the beginning of module 1). Each group will therefore make at least one phase classification, which should be seen as provisional at this stage. When the phases from all the areas/livelihood zones in the country have been put together, a peer review process should be done to build a wider consensus on your classification, and make changes as required (see Module 7: How Do You Know You Got It Right? The Peer Review Process).

Once you have followed the two step process described here and have come up with phase classification judgements for all the templates you are analysing, you can go to the next module on *Risk Analysis*.

MODULE 3

RISK ANALYSIS



3.1 Objective of the Module and What You Will Be Able to Do When You Have Completed It

- **Objective:** to guide you in developing a risk analysis and filling in the remaining columns of Part one of the Evidence Template
- What you will be able to do:
 - o Distinguish between process indicators and outcomes
 - o Develop a risk analysis using process indicators and complete part 1 of the evidence template
 - o Combine risk analysis with local expertise to make a judgement on the probability of a phase deteriorating into a more serious situation (usually an emergency phase: 3, 4 or 5).

3.2 What You Need

- ✓ A completed evidence template part 1, column 2 (evidence) and column 3 (phase classification)
- ✓ Your data, typically process indicators from an early warning system
- ✓ Risk Analysis table from the Phase Classification Reference Table (P.5 of the Technical Manual)

Figure 3.1: IPC Risk Analysis Reference Table

Risk of Worsening Phase	Probability / Likelihood (of Worsening Phase)	Severity (of potential Phase decline)	General Description and Changes in Process Indicators	Implications for Action
Watch	As yet unclear	Not applicable	Occurrence of, or predicted Hazard event stressing livelihoods; with low or uncertain Vulnerability and Capacity	Close monitoring and analysis
			Process Indicators: small negative changes	Review current Phase interventions
Moderate Risk	Elevated probability / likelihood	Specified by predicted Phase Class, and indicated by colour	Occurrence of, or predicted Hazard event stressing livelihoods;	Close monitoring and analysis
		of diagonal lines	With moderate Vulnerability and Capacity	Contingency planning
		on map.	Process Indicators: large negative changes	Step-up current Phase interventions
High Risk	High probability; 'more likely than not'		Occurrence of, or strongly predicted major Hazard event stressing livelihoods; with high Vulnerability and low Capacity	Preventative interventionswith increased urgency for
			Process Indicators: large and compounding negative changes	High Risk populations Advocacy

3.3 Before You Start...

The phase classification provides us with a situation analysis that is current and emerging, with a defined 'shelf-life' or period of validity – usually until the next major agro-climatic season. Thus while an element of **outlook** is present, the analysis gives us what we are confident is going to happen during the validity period. Early warning, however, is more to do with <u>gauging the probability of a situation developing</u>. In the IPC, we look at the relative *risk* of an area or community slipping from one phase to a more severe phase. Thus, we are **not** classifying the likeliness of the risk worsening within the same phase.

Risk is a function of two principle elements: exposure to a hazard (by which we mean a threatening event), and the vulnerability of the community or individual to that particular hazard (note that different communities will be vulnerable to different hazards: a cattle pastoralist may be vulnerable to rinderpest outbreaks while a camel pastoralist will not be).

Vulnerability brings in the element of *resilience*, which has two aspects: the ability of a system (community, household... etc) to absorb the effects of a hazard and remain within a given state *[resistance]*; and the ability of a system to 'bounce back' to a pre-existing (or new) condition. Within both of these 'types' of resilience, the concept of coping and flexibility is integral: those with more ability to cope, or adapt quickly to new circumstances (either temporarily or permanently) are generally more resilient than those with less coping capacity and flexibility. Another way at looking at resilience is that change is often an opportunity for a resilient community/household/system; whereas for an un-resilient system, change can often be a disaster.

In the IPC, there is currently no specified way of recording early warning evidence, however, it is useful to list and describe firstly the relevant hazards that communities could be exposed to and the probability of the hazard occurring, and secondly the vulnerability of the community concerned to the hazard if it occurs. As this analysis is predictive in nature, outcomes data is not directly relevant. Process indicators, typically from national or sub-national early warning systems, will be used.

BOX 1

What are Process Indicators?

These are factors that contribute to an eventual output, often as a chain of interrelated cause and effect chains. For example, a much reduced seasonal rainfall would be expected to result in lower agricultural production, which in turn will lead to lower availability of food (at the local level at least), and a consequent increase in prices, affecting access to food, and reduced consumption. This sequence of events, if they occur, could be expected to impact negatively on poor people's food security, and manifest in increased acute malnutrition. The process indicators in this example are: rainfall; agricultural production; food availability; market prices; terms of trade (access to food in the market) dietary diversity and coping strategies (such as skipping meals). The outcome is acute malnutrition (a reference outcome in the IPC), and the direct evidence of this outcome will be an anthropometric measure of acute malnutrition such as w/h.

3.4 Step 1: Developing a Risk Analysis Matrix

To help organise your process data and to bring in the key hazard and vulnerability information, it is helpful to fill in the risk analysis matrix as shown in Figure 3.2.

Figure 3.2: IPC Risk Analysis Matrix

Hazard	Probability of event happening	Vulnerability to the Hazard	Probable impact and magnitude
1.			
2.			
3.			

The hazard refers to any threat that is reasonably likely to happen (it is probably not worth your time to list every conceivable hazard) and that could have a significant impact upon livelihoods. The *probability* of the event happening is usually fairly subjective, but as much as possible, you should include as much evidence that you can, such as climate outlook reports, trends of key commodity prices, or reports of rising tensions between conflicting groups to name a few. The *vulnerability* to the hazard should include information on why the community you are considering is particularly vulnerable to each hazard. Finally, the likely impact and magnitude would include how the hazard may impact on livelihoods or how this hazard has affected people in the past - historical evidence is helpful here –, what people are likely to do to absorb the impact, and the likely numbers of people who are at risk. Your risk analysis matrix can be pasted into your template if you like, or you can just use is as an analytical tool.

BOX 2

For example, a community living near a river basin may be considered particularly vulnerable to floods; destitute pastoralists may be vulnerable to rising food prices with high dependence on the market and low and unstable incomes; rain-fed agriculturalists living in marginal areas maybe vulnerable to poorly distributed rainfall because of their means of production, levels of poverty and poor access to alternative income sources.

3.5 Step 2: Making the Prediction on Risk

Let us remind you that the judgement we are talking about here is the relative risk of a community (whatever analytical unit that you area dealing with) of going from one phase to a worse phase during the period of validity for the analysis. This has usually concentrated on going from a non-crisis (phases 1 and 2) to a crisis phase (3, 4 or 5) or from one crisis phase to a worst crisis phase. It is possible for phases to be jumped, so you should also think about the possible impact of the hazard. For example, a community in phase 1 may leap straight to phase 5 if a rapid onset disaster such as an earthquake struck resulting in destruction of assets and displacement away from their livelihood means.

So the first thing to think about is the relative probability of the hazard actually taking place during the period of analysis. For hazards relating to climatic variation (drought and floods), national and regional climate outlooks can be an early guide to an upcoming season, although they are often inaccurate. Other early indicators would include the start date of the season compared with normal and early performance. Keep in mind that for a flood hazard, the cause may be rainfall falling far way or even in another country, such as flooding in southern Somalia from heavy rain falling in neighbouring Ethiopia.

The likely impact is a function of vulnerability to the hazard, and here the elements of resilience are important: the ability to absorb the shock through coping and/or adapting alternative livelihood strategies. Magnitude is also important in terms of numbers or proportion of the community who would be affected by the hazard. The combination of these factors should give a picture of whether or not a hazard, if it occurred, would tip the community into a more serious phase given their vulnerability to the hazard and ability to cope/adapt, together with the potential extent of the deterioration in food security.

If the picture does suggest that the shock could be serious, the final risk phase is based on the relative probability of the event taking place (high, moderate or severe). See Figure 3.3 for an example.

Figure 3.3: Evidence of Risk for Worsening Phase or Magnitude and Risk Level Classification

	Time	Period of Anal	ysis: February	2008		
Projected Phase for Time Period (Circle or Bold appropriate Phase)	Evidence of Risk for Worsening Phase of (list hazard and process indicate) List evidence in support of ri Source of Evidence Reliability Score (1=very rel	ors) isk statement	at reliable 3=uno	confirmed)		Risk Level (Circle or Bold appropriate Risk Level and expected Severity, if warranted)
Acute Food and Livelihood Crisis	Hazards: Resumption of violent confligovernment. Continued inter-ethnic tensions.	•			lition	Moderate Risk o HE
		Maize	Wheat	Beans	Potatoes	
	Cultivated land 2007	75,778	16,182	17,173	8,431	
	Cultivatable land likely to be out of production, 2008	24,101	1,430	5,589	2,303	
	Net cultivatable land 2008	44,069	11,337	9,584	4,048	
	% land likely out of production 2008	31.8	8.8	32.5	27.3	
	If return to farms possible, p inputs including tractor hire Relief assistance reduces of: Vulnerability: Sustained displacement, cor food prevented; no income swith host families. If return to farms: late plant income; livestock not return further violence and displace. High dependence on relief a stoppage of relief.	e, fertilizers, stock stops due to trans implete lack of acco sources; continued ing and high costs led and income fro ement if underlyin	feeds. port interruption ess to land and pr I dependence on of production re om milk limited o	s or lack of resou oductive assets. relief assistance i duce potential ha r lacking. [long to r resolved)	Production of in camps or arvest and erm risk of	

MODULE 4

THE NUMBERS GAME — ESTIMATING POPULATIONS IN EACH PHASE



4.1 Objective of the Module and What You Will Be Able to Do When You Have Completed It

• Objective: to guide you in estimating populations affected by different severity levels of food insecurity

• You will be able to:

- o Develop a population table and ascribe estimated populations in each classification phase
- o Justify your judgements on the magnitude of a food security problem
- o Distinguish between estimates of populations facing food insecurity and estimations of beneficiary numbers, typically calculated for specific interventions such as food aid

4.2 What You Need

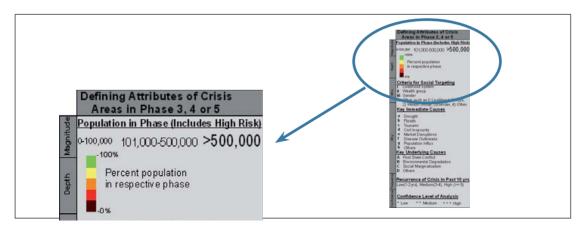
- ✓ The right people around the table: it is important to get technical consensus while estimating population tables. Care should be taken to avoid participant seeing this exercise as a direct means to come up with beneficiary numbers, though this may be done as an important aspect of response analysis and planning:
- ✓ Data from your country to an appropriate level of disaggregation on population, and wealth ranking or similar means to estimate vulnerability on the basis of assets or poverty; other data depending upon the hazard (for example, population living in flood-prone areas).
- ✓ Section 5.3 of the Technical Guide 'Standardised Population Tables' (See Figure 4.1);

Figure 4.1: Table of Estimated Population by Region in Humanitarian Emergency and Acute Food and Livelihood Crisis

		Assessed and	Contingency Population i	n AFLC and HE
Affected Regions	Estimated Population of Affected Regions ¹	Acute Food and Livelihood Crisis (AFLC) ²	Humanitarian Emergency (HE) ²	Total in AFLC or HE as % of Region Population
North				
Bari	235.975	45.000	0	19
Nugal	99.635	20.000	0	20
Sanag	190.455	55.000	0	29
Sool	194.660	50.000	0	26
Togdheer	302.155	40.000	0	13
Coastal (fishing)		20.000		
SUB-TOTAL	1.022.880	230.000	0	22
Central				
Galgadud	319.735	40.000	0	13
Mudug	199.895	20.000	0	10
SUB-TOTAL	519.630	60.000	0	12
South				
Bakol	225.450	45.000	105.000	67
Bay	655.686	135.000	395.000	81
Gedo	375.280	80.000	180.000	69
Hiran	280.880	55.000	0	20
Lower Juba	329.240	60.000	115.000	53
Middle Juba	244.275	50.000	120.000	70
SUB-TOTAL	2.110.811	425.000	915.000	63
TOTAL	3.653.321	715.000	915.000	45

✓ Defining Attributes legend (new amended version) from the mapping protocols (Figure 4.2).

Figure 4.2: Defining Attributes Legend



4.3 Before You Start...

In any situation analysis it is important to include the severity of the situation (phase classification), the geographic spread and scale in terms of numbers of people, in addition to other things like causes. We have dealt with the first two of these in the first 3 modules as part of the phase classification process. It is really important to estimate the scale of the situation (especially in the crisis phases) in order to convey to decision makers the seriousness of the situation and the scale of a response that would have to be put into action.

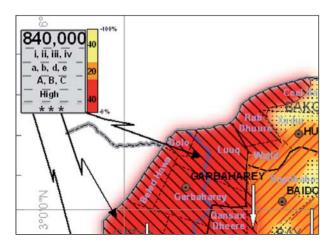
This part of the IPC process can sometimes be quite difficult to do, both technically and, more importantly, as a result of possible influence from elements who may want to see a situation seem better or worse than it is. Part of the reason for this is due to assessments conventionally combining situation analysis with response planning, and particularly with estimating populations in need of something (typically food aid, seeds and tools or other types of relief). The response planning process is nearly always a more political one than situation analysis, since the allocation of resources is central. So it is vitally important to get some things very clear to be able to do a population estimate free from these kind of influences and to maintain the objective quality of our situation analysis.

BOX 2

Estimating what population and for what purpose? A clarification

The IPC tool is used to develop a situation analysis that should be as objective and transparent as possible. When estimating population numbers we are interested in the number of people that are estimated to be in each IPC crisis phase (3, 4 or 5). This means that when an area has been attributed with a crisis phase, we estimate the number of people living in that geographical area that are in different phases, because we know that not all the people in the area will be affected by the hazard in the same way: some will be in a less severe phase, while others may even benefit from the situation. By doing this we are providing our decision makers with a picture, not only of the overall phase of an area or LZ, but also of the depth and severity of the problem in terms of food security. This estimation is done without any judgement regarding the possible needs or response options at this stage. Not getting into a response analysis or planning helps to maintain the objectivity of the situation analysis. The population estimates are presented in two ways on the map: firstly the estimated number of people in the area in crisis that are in the most severe (classified) phase is indicated at the top of the call-out box; and secondly the estimated population in each phase as a percentage indicated by the stacked bar next to the call-out box. See the example in Figure 4.3.

Figure 4.3: Population Estimates as Presented on the Map



There is no set way to do the population estimates and it is necessary for countries to develop their own methods that follow the same general principles. Note that it is important to develop a method that allows you to estimate populations in the same way over time (i.e. over future analysis cycles) and space. This means that you will be making the estimates in the same way each time, and can communicate to your users about how you do it in a transparent way

General Principles for estimating populations:

- Populations are estimated without any judgement concerning any types of assistance that people may or may not need.
- 2. Populations are estimated in terms of the degree or severity of food insecurity they are experiencing.
- 3. Within a crisis phase, there will be people who are more or less seriously affected, and therefore not all the population living within a crisis phase will be facing the same degree of food insecurity. It follows that some people may be experiencing a 'Humanitarian Crisis' level of food insecurity in an area classified as phase 4, but that others may be facing less severe phases this allow us to develop the staked bar in the call-out boxes (e.g. above).
- 4. In order to differentiate between these groups and to estimate proportions in the population as a whole, information about peoples' known vulnerability in the area is needed. This may be a proxy such as wealth ranking or poverty level (on the assumption that poor people are generally more vulnerable to hazards).
- 5. Differentiation between groups within the phase will be a factor of several elements including the degree of homogeneity (sameness) within the area or LZ, and the effect of the hazard: in some cases such as an earthquake, the entire population in the epicentre may be affected.
- 6. Population estimates are estimates <u>not</u> exact figures. They provide an indication of the magnitude of the food insecurity problem for decision makers, but are usually not sufficiently accurate to base or target responses, which may require more detailed assessments.⁴

BOX 2

It is worth emphasising that it is important to develop a good analysis of the shock and vulnerability within your analysis area/LZ, rather than mechanically estimate populations based solely on your wealth ranking groups or poverty levels. It is also really important to explain your methodology so that others understand the basis of your estimates, which is essential to maintain the credibility of your overall situation analysis. Remember that although you are estimating population in each phase, some people will be thinking in terms of beneficiary numbers, so it is important to explain fully how you estimated your population figures.

⁴ Note that while these principles reflect the current thinking on estimating populations. This area of the IPC is being considered a priority for regional and global steering groups to review and possibly revise.

4.4 Step 1: Estimating Populations in Each Phase

The first thing to do is to organise your population data in the most appropriate way that you can given your analysis framework. This is generally reasonably straight forward if you are doing your analysis on the basis of administrative zones as most population figures follow these. If you are dealing with a livelihood zone, however, you may need to calculate or estimate the population of that livelihood zone. Similarly, you will need to estimate populations that are specifically at risk of a hazard such as a flood on the basis of where they live and their proximity to flood-prone areas.

The next stage is to look at your baseline wealth ranking or poverty data that relates as much as possible to your population figures and the unit of analysis. Your knowledge of the area, livelihood dynamics and vulnerability will be essential here to then make a judgement on the numbers of people that fall into each phase. Generally speaking, if an area/LZ has been classified as a humanitarian emergency, you would expect your 'poor' (and 'very poor') wealth groups to be included in phase 4. If you don't have wealth ranking data available, most countries have poverty data which may also help: people considered to be 'hard core' poor will usually be equivalent to the poor or very poor in wealth ranking approaches; middle wealth groups, or 'relative poverty' populations (from poverty surveys) might fall into phase 3 depending upon a good analysis of the hazard and possible impact on these groups; and the 'wealthy' or 'non-poor' may fall into phase 1 or 2. This kind of analysis will allow you to estimate proportions of the overall population in a given area that will fall into different phases within an overall phase, which can then be related to actual estimated numbers of people:

D1 * X1 * X2 = total number of people affected by phase in overall phase area, where:

D1 = District (or equivalent administrative area);

X1 = percentage of population in particular livelihood zone or other analytical unit (e.g. low lying areas in floods);

X2 = Percentage of poor group (wealth group or from poverty survey) living within the LZ or other analytical unit.

A further refinement would be a judgement on whether all or a portion of a particular wealth group or poverty group fall into the same phase. For example, in a drought hazard, if the rainfall has been good in one area, the estimated population in a crisis phase may exclude this good rainfall area.

This would add another 'X' to the formula:

D1*X1*X2*X3 = total number of people affected by phase in overall phase area, where:

X3 = is the percent of poor wealth group in a crisis phase (i.e. that would exclude the percent of the poor wealth group that are not considered to be in crisis from the analysis: such as because of rainfall distribution)

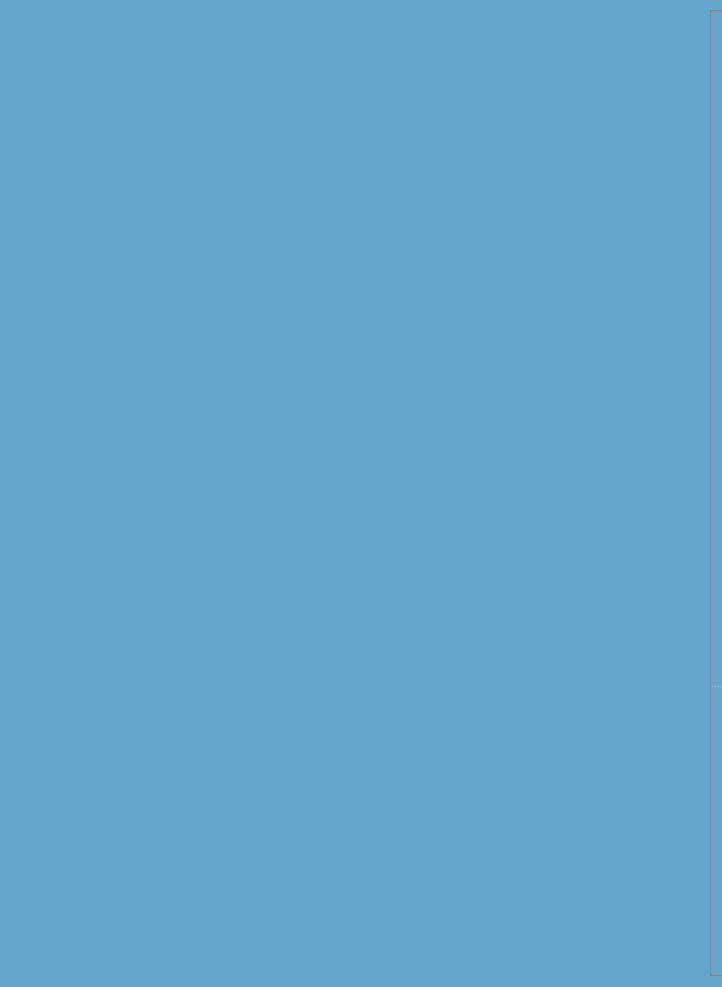
If you have more than one livelihood zone within the district, you just have to repeat the process for the other livelihood zones and add up the final figures. An example of how FSAU estimate their populations is included in Annex 3.

4.5 Step 2: Validation and Peer Review

As this is an important and potentially contentious part of the analysis, it is important that you have the right people around the table to discuss and gain consensus on the population estimates. It is suggested that you fill in the population estimates in an easily understood manner (using the population tables in the Technical Manual) and present to your wider group.

During the peer review process (*see Module 7*) when the entire analysis is reviewed by the wider team (and if possible a panel of 'outside experts'), particular attention needs to be placed on the population estimates in each phase.

The last thing to do when consensus is attained, is to develop the stacked bar proportions and input the estimates into the mapping protocols.



5.1 Objective of the Module and What You Will Be Able to Do When You Have Completed It

- **Objective:** to guide you in analysing the impact of a given hazard on the livelihoods of people, identifying the key immediate and underlying causes and describing some possible response options
- You will be able to:
 - o Fill in Evidence Template part 2, including analysing the impact and immediate causes of a hazard and potential response options that should address immediate needs;
 - o Fill in Evidence Template part 3, including analysing the impact and underlying causes of a hazard and potential response options that will address some underlying issues.

5.2 What You Need

✓ Blank Evidence Templates 2 and 3 (see Figures 5.1. and 5.2)

Figure 5.1: IPC Analysis Template 2

rea of Analysis (Reg	ion, District, or I	Livelihood Zone):			Time Peri	od of Analysis:	
		Al	NALYSIS				ACTION
Current or Imminent Phase Circle or Bold Phase from Part 1)	Immediate Hazards (Driving Forces)	Direct Food Security Problem (Access, Availability, and/or Utilization)	Effect on Livelihood Strategies (Summary Statement)	Population Affected (Characteristics, percent, and total	Projected Trend (Improving, No change,	Risk Factors to Monitor	Opportunities for Response (to Immediately improve food access)
Generally Food				estimate)	Worsening, Mixed Signals)		

Figure 5.2: IPC Analysis Template 3

ea of Analysis (Regio	on, District, or Livelihood Zone):		Time Per	iod of Analysis:
		ANALYSIS		ACTION
Current or Imminent Phase (Circle or Bold Phase from Part 1)	Underlying Causes (Environmental Degradation, Social, Poor Governance, Marginalization, etc.)	Effect on Livelihood Assets (Summary Statements)	Projected Trend (Improving, No change, Worsening, Mixed Signals)	Opportunities to support livelihoods and address underlying causes (Policy, Programmes and/or Advocacy)
Generally Food		Physical Capital:		
Secure 1A		Social Capital:		
Generally Food Secure 1B		Financial Capital:		

- ✓ Your data and completed evidence template 1
- ✓ Livelihood baselines and local knowledge of livelihood systems and strategies

5.3 Before You Start...

The evidence templates parts 2 and 3 completes the situation analysis by looking in detail at the possible impacts and causes of the food security situation and taking the first steps into response analysis by looking a potential appropriate responses.

It should be noted here that there is a distinction between **response analysis** and **response planning**: the former is an analysis of potential responses based upon the situation analysis, without consideration of resources, capacity on the ground or any political aspects – in this regard it is 'blue sky thinking' and should be done by food security analysts, with some inputs from operational people. In contrast, response planning is the process whereby responses are developed as an operational plan, and therefore issues around resources and capacity are as important as appropriateness of the response; it is also an inherently political process since it involves resource allocation (For the 'Analysis-Response Continuum' see Figure A in the *Introduction* section of this Users Guide).

It is for this last reason that the IPC stops at impact analysis, since the process of response planning has more potential to influence the situation analysis – to make the situation look worse or better than it actually is; or to lead decision makers towards a particular type of intervention that might suit a particular agency mandate or political imperative. As much as possible we need to insulate our situation analysis from these kinds of pressures in order to provide decision makers with a balanced, objective and transparent analysis, and to maintain credibility.

Having said this, it is obviously very important to make the link between the situation analysis and the response that is put in place, and that is what we do with parts 2 and 3 of the template. It is also worth noting that this part of the process is often missed or done rather badly. Assessments may produce good situation analyses and the government and agencies use the information to develop responses based upon 'what they've always done' or their comparative advantage/ capacity, rather than based on an analysis of the needs. This part of the IPC analysis is your opportunity to identify the causes and needs (both immediate and underlying) and make recommendations on what should be done, rather than what habitually gets done.

5.4 Step 1: Filling out the Evidence Template Part 2

Part 2 is divided into two overall sections: analysis and action. It goes without saying that the analysis part should be filled in first with the action section being done on the basis of the analysis.

The Analysis Section:

Parts of the analysis components of this template can be taken directly from Part 1, including the first column which is merely to record the Phase Classification. The second column lists the direct hazards, which you should have available from your risk analysis while filling out Part 1 (see also Module 3). The next column looks at the effect of the hazard on livelihood strategies in the area of analysis, with a focus on loss of or loss of access to key livelihood assets such as production, income, access to land or pasture, access to health facilities and so on. Note that this relates to the effect of the hazard on livelihoods rather than general statements on livelihood capitals, and it should also include what people are doing about it.

BOX 1

Remember to focus on loss of or loss of access to key livelihood assets!

For example, if production is very low, people may adjust their livelihood strategies (at least temporarily) such as by seeking off-farm labour, or engaging in petty trade. Information about peoples' coping strategies is helpful here.

Estimated populations affected by the hazard or each hazard if there are more than one should be included in the next column. Work done on estimating populations affected by a given crisis phase will be helpful here, but more analysis may need to be done to look at each hazard in a multiple hazard scenario. Finally the projected trend for each hazard completes this section of the template (improving, no change, worsening, or mixed signals). It is helpful here to indicate rate of change as well as the direction, for example, 'rapidly worsening' provides a sense of urgency that would be missing if you just state that the situation is worsening. Mixed messages refer to situations where the signals are not clear or are contradictory.

The Action Section:

The first column directs actions in terms of monitoring key risk factors. These would be things that, if happened, would lead to a worsening of the situation. For example, return of IDPs after the planting season; or critical water levels in a river threatening to flood; or road blocks established that would restrict access to markets; or rainfall at a critical stage of crop development... etc. The following column requires a good level of analysis of the situation in order to identify appropriate responses that might improve *immediate* access to food. The analysis should take into consideration things like:

- o **The immediate causes and needs**: this is your first consideration to develop possible response options that address immediate needs and causes.
- o Market function: As a general principle, it is best to avoid distorting or undermining markets, though stabilisation may be an option involving direct engagement with markets, especially to maintain the terms of trade of vulnerable people. If markets are functioning well and food is available, it is usually better to recommend a cash-based response over a food-based one to avoid distorting and undermining markets and producers; if food availability is the problem, a cash-based response can cause local inflation, again distorting markets;
- o **The characteristics of the predominant livelihood:** what would be the appropriate response(s) that would help to protect or rebuild livelihood assets?
- o **The stage in a crisis cycle**: different responses may be required at the beginning, middle or end of a crisis, such as livestock de-stocking as an early response, and restocking as a recovery intervention.
- o Existing responses: avoid duplication, but rather identify gaps in geographical coverage and sectors
- o **Local Priorities:** What are the priorities of households and communities and of the local agencies (especially government)?

The actions here should be discussed with the wider group doing the analysis during the peer review process, and as much as possible, developed into a comprehensive response framework at the national level. To reiterate: this is a response analysis which identifies the most appropriate responses, based upon the situation analysis. It does not represent a response plan in which resources, capacity, logistics and other elements would be considered.

The following example from Kenya (Figure 5.3) gives some guidance on how Part 2 of the template looks into a Humanitarian Emergency among IDPs displaced by post-election violence in early 2008.

Figure 5.3: An Example of Evidence Template 2 Analysis for IDP Nakuru, Kenya

Part 2: Analysis of Immediate Hazards, Effects on Livelihood Strategies, and Implications for Immediate Response Area of Analysis

(Region, District, or Livelihood Zone): IPDs Nakuru	100d Zone): IPDs Nakuru						Time Period of Analysis: Feb - June 2008
			ANALYSIS				ACTION
Current or Imminent Phase (Circle or Bold Phase from Part 1)	Immediate Hazards (Driving Forces)	Direct Food Security Problem (Access, Availability, and /or Utilization)	Effect on Livelihood Strategies (Summary Statement)	Population Affected (Characteristics, percent, and total estimate)	Projected Trend (Improving, No change, Worsening, Mixed Signals)	Risk Factors to Monitor	Opportunities for Response (to Immediately improve food access)
Emergency Emergency	Resumption of violent conflict Continued interethnic tensions If return to farms possible, planting is later than optimal. Relief assistance reduces or stops	Prevention of return to productive livelihood sources (farm and livestock). No Food production reduces food availability. Access to food limited to relief supplies. Interruption of relief would limit access. Late planting would lower yields and availability to food.	fithe IDPs can not return to their farms, or be resettled elsewhere, they will necessarily remain in IDP camps, or be hosted by relatives. In both cases, they will be heavily dependant upon relief for their basic needs. Intensified conflict would present the risk of interrupted relief supplies and a humanitarian catastrophe if this is sustained. Additional risks to wellbeing are associated with deterioration of camp conditions during the rainy season (March to July). If the political situation continues to improve at the national and local levels, IDPs may be able to return to their farms if security is guaranteed. In this case, land preparation and planting is likely to be later than optimal, and production adversely affected. The loss of livestock, particularly dairy cows, will erode incomes unless restocking is carried out.	residing in camps and with host communities. Note the number of IDPs residing with hosts are not verified, and hence the total number of IDPs may be an underestimate	Mixed Signals	Political power- sharing effective at national level; peace building and reconciliation; addressing underlying causes and perceptions at the local level. Government policy and action concerning return of IDPs to their farms and/or resettlement elsewhere. Timing of return (or not) in terms of the agricultural calendar. Return later than March will result in very late planting and low production.	1. Continue to meet the basic needs of IDPs in camps and with host families through relief interventions: food; health services, adequate water and sanitation; shelter; education. 2. Psycho-social support for those directly affected by violence and trauma 3. Support to peace-building and reconciliation efforts to rebuild frust between the conflicting communities. This is a prerequisite to allow IDPs to return in security and peace. 4. Provide farm inputs to returning farmers (or to those being resettled on farmland elsewhere). Priorities would be subsidies on tractor hire, seeds and fertilizers. Farm implements on a case by case basis. 5. Assistance in terms of shelter/housing for IDPs who had their houses destroyed during the violence. 6. Redistribution of livestock to IDPs who lost their livestock. Dairy cattle would be a priority. 7. Support to the resolution of underlying issues, particularly associated with land ownership.

5.5 Step 2: Filling out the Evidence Template Part 3

Part 3 of the template is similar to Part 2 that you have just completed, but it focuses on the underlying causes of food insecurity. It has the same two sections for 'Analysis' and 'Action'.

The Analysis Section:

As for step 1, the first column is just to record the phase that your analysis area/LZ is in. The second column looks at the **underlying** cause(s) of food insecurity such as climatic variability; long-standing political exclusion; economic marginalisation; environmental degradation etc. The third column is for you to write summary statements on the impact of the underlying causes on each of the livelihood capitals. You will see that the template has six capitals rather than the more conventional five, with 'Local Political Capital' as an additional one. Depending on the context in your country, political capital can be looked at individually (if it is particularly important) or integrated with Social Capital. The forth column is to indicate the direction of change as in part 2.

The Action Section:

This is similar to part 2, but you should identify actions and interventions that address the underlying causes that you have already included in the analysis section. In many instances, you will have the same subject or sector in both parts 2 and 3, but the response options will probably be different. For example, an acute water shortage may have immediate and underlying causes. The immediate cause may be a critical shortage of water caused by a breakdown in the nearby borehole. The immediate response may be to fix the borehole pump (if that is easily done) or truck in emergency water supplies. The underlying cause maybe poor borehole maintenance, or not enough boreholes in the area, in which case the recommended action may be to establish water management committees, or drill more boreholes in the area.

BOX 2

Avoid 'shopping' lists of recommendations!

Note that it is not a requirement to make recommendations for all of the causes – there may be no obvious actions to take, or so general that they may not be useful. It is generally best to avoid 'shopping' lists of recommendations, and instead look for priority actions that have a good chance on being acted on.

This is a simple example, and you are most likely to be faced with much more complex immediate and long term causes. For example in Southern Sudan very high malnutrition rates appear to be caused by a complex set of factors including hygiene, poor water quality, poor access to health facilities and poor care practices. The immediate action may be to provide supplementary feeding to malnourished children to save lives, but this will clearly not solve the underlying problem that will need a much longer term and multi-sectoral approach.

Let's stay with the example from Kenya used above and show you how Part 3 was completed.

Figure 5.4: An Example of Evidence Template 3 Analysis for IDP Nakuru, Kenya

Part 3: Analysis of Underlying Structures, Effects on Livelihood Assets, and Opportunities in the Medium and Long Term

Area of Analysis (Region, District, or Livelihood Zone): IDPs Nakuru	velihood Zone): IDPs Nakuru		, <u>į</u>	Time Period of Analysis: Feb - June 2008
		ANALYSIS		ACTION
Current or Imminent Phase (Circle or Bold Phase from Part 1)	Underlying Causes (Environmental Degradation, Social, Poor Governance, Marginalization, etc.)	Effect on Livelihood Assets (Summary Statements)	Projected Trend (Improving, No change, Worsening, Mixed Signals)	Opportunities to support livelihoods and address underlying causes (Policy, Programmes and/or Advocacy)
Humanitarian Emergency	Conflict as a consequence of: Political disputes at local and national levels; particularly triggered by disputed presidential elections Historical and contemporary land ownership issues. Inequitable distribution of resources by political elites	Physical Capital: Access to land and other productive assets is currently problematic due to continued insecurity and ethnic tensions. Loss of livestock (both actual and genetic material) is a particular source of livelihood erosion that will require time and resources to rebuild.	Mixed signals	Peace building and conflict resolution Resolution of long standing land ownership issues Peaceful return of IDPs to farms; and/or resettlement in productive land elsewhere Shelter (in camps or return)
	 Population growth and pressure on land resources, with low alternative livelihood opportunities. 	Social Capital: Inter-ethnic tensions have excluded IDPs from political dialogue is some cases;	No Change	Advocacy to reduce ethnic tensions and build trust between communities
		Financial Capital: Income sources from agricultural production labour and trade are seriously curtailed; access to credit has been disrupted and loans are pending and may result in default.	Worsening	Provision of farm inputs to help IDPs resume their livelihoods.
		Natural Capital: displacement has denied most IDPs of their natural capitals they enjoyed when on their farms (land, water etc).	No change	
		Human Capital: access to education is varied depending upon location of camp and stability of stay. Access to health care is adequate in established camps, but not in remote, small and more temporary camps.	No change, may worsen with the next rainy season	Ensure that health and education services are maintained in sustained camp situation
		Local Political Capital: Polarization and ethnicitization of local and national political representation disenfranchises some IDP populations from effective political capital depending on whether the local MP comes from their ethnic group or an apposing community.	No change	