
1. Introduction
Food security and nutrition response options analysis may be defined as the process by which a range of appropriate and feasible options to address the existing and/or likely food or nutrition insecurity of target populations is identified. This process may be triggered by a range of considerations and have a range of objectives.

In the context of an emergency, we are primarily concerned with the trigger being an actual or predicted food security / nutrition / food security and nutrition crisis and the objectives as being the saving of lives and livelihoods in the short term and “building back better” subsequently. Building back better means undertaking responses which target the causes of crisis so as to reduce vulnerability and / or exposure to future shocks. In non-emergency contexts there are several potential triggers including the requirements of planning cycles, policy decisions and funding availability, and several possible objectives which contribute to the overall goal of improving food security and nutritional status.

Conceptually, response analysis is situated between situation analysis and response planning, as described in figure 1 below:

Figure 1: Conceptual Overview of Response Analysis

Adapted from IPC Technical Manual Version 1.1

In the diagram, there are two parts to response analysis, potential response options identification and response options screening. The diagram indicates that there is an overlap

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between response options identification and situation analysis and between response options screening and planning. This signifies the fact that the roots of response analysis are in situation analysis and the fruits in response planning. The diagram also indicates that monitoring and evaluation information is a core ingredient for response analysis: only by learning from past experiences can current and future responses be improved.

It should be noted that this relationship applies across different kinds of emergencies. In the context of sudden onset emergency situations, the situation analysis – response analysis – response planning relationship should take place within the framework of contingency planning. In slow onset crises, response analysis should be woven into early warning so that the latter is not just a process of predicting outcomes, but also a way of prioritising and screening response. In complex emergencies, response analysis should be part of periodic assessment and planning processes (for example the annual CAP Process). In all kinds of emergencies, response analysis should take place periodically, led by situation analysis and M&E information and taking place before during and after different kinds of shocks.

2. What should a response analysis framework consist of?

A framework for response analysis must provide a way of linking situation analysis with response planning, conceptually, analytically and in terms of process - given prevailing institutional architecture. It must do this in a way that builds on existing processes, tools and frameworks and not re-invent them. It should avoid bias, foster dialogue and ensure an acceptable level of analytical rigour so that response options pass tests of appropriateness and feasibility.

The conceptual space for a Response Analysis Framework is as depicted and explained in relation to figure 1 above.

The analytical aspects of the framework derive from the tools and techniques that it offers to turn the concepts into reality (in terms of feasible and appropriate response options). One aspect of this is to provide a “response analysis lens” to information gathered through situation analysis (current situation) and also projections and scenario planning (future situation). What this means is looking at food security and nutrition assessments with the questions: “what does this information tell me about the most appropriate and feasible responses for particular population groups over particular timeframes and geographical areas? and “where are the gaps in information?” In response to this second question, the analytical part of the framework should also provide tools which may be used to “plug gaps” in situation analysis.

The analytical aspect of the framework must also be able to give guidance on the selection and screening of response options. This means it should provide a technique or techniques for ensuring that the analysis of response options is done in such a way that only options passing minimum tests of feasibility and appropriateness graduate into the response planning process.

The process elements of the Framework are perhaps the most important of all. “Process” means the way in which the analytical tools and techniques are applied in particular contexts. There are many examples of sound technical tools and approaches failing to reach their
objectives because they were not applied in appropriate ways. Whatever the institutional context, the application of the framework should be done in such a way that ensures the following qualities:

- **Bringing the right people together:** The process of response analysis must involve people with different perspectives and competencies. The two core elements are people with food security and nutrition analysis skills and people with programming skills and responsibilities. Depending on circumstances it would also be necessary to involve different organisations, and include different sectors (government, donors, NGOs, UN agencies, private sector, CBOs). Multi-agency and multi-sectoral involvement is important in order to bring out the complementary nature of response options and also to reduce bias in options selection. In addition, it is vital that the mix of people contains those with good local knowledge of the geographic areas being discussed.

- **Bringing the right information together at the right time:** There must be a common platform of information in order to inform the response analysis process. This may come from a variety of sources but should cover a number of minimum bases. Table 1 below provides examples of some of the information necessary from situation analysis. This is just a sub-set of what is required. Other aspects will be more operational such as 3W matrices (i.e. “who” does “what”, and “where”); agency and government policy and programming frameworks; inter-agency planning and appeal frameworks and donor strategies.

- **Adapting to existing planning frameworks and timetables and not inventing new ones:** The Framework needs to be applied in a way that adds value to existing processes, not replaces them. It may indicate areas where existing planning arrangements are weak or need to be connected, but should not rely on such connections to be made. Key processes will include contingency planning, cluster response planning (inside or outside CAPs) as well as agency specific planning.

- **Fostering consensus – with rigour:** The Framework should be applied in a way that encourages debate and ultimately consensus on the right responses. The way in which this is done should be rigorous and evidence based. This places considerable importance on facilitation processes.

3. **The FAO Response Analysis Framework Pilot**

During 2010, FAO has been piloting the development of a Response Analysis Framework for Food Security and Nutrition (RAF), supported by ECHO. How does this RAF relate to the conceptual, analytical and process aspects outlined in section 2 above?

3.1 **Institutional and process issues:**

The RAF works best in multi-agency / multi-sectoral settings such as inter-cluster workshops and planning processes. It can also be used in single cluster / sector / agency settings but if so then this should be the second stage of a two stage process – this first stage being a multi-agency / sectoral application to derive an agreed situation analysis and forecast. If used in this way, the chances of agency bias and supply driven response identification are greatly reduced.
Ideally, the people involved at the start of a RAF process should be a mixture of food security and nutrition analysts and programmers. As this is the stage at which food security and nutrition situation information analysis is further analysed in order to identify entry points for response, the input of both situation analysts and programmers is essential. Once potential response options have been identified, there is less need for analysts.

The RAF has been designed in such a way that it can be adapted to different planning processes. So far, it has been used in the context of the CAP process (in Somalia), where government participation is minimal, and for district level food security and nutrition planning (in Indonesia), where government is the central authority.

The quality of response analysis done through the RAF depends greatly on the quality of facilitation and the commitment of participants.

3.2 RAF roots – situation analysis

In terms of conceptual scope, the RAF is rooted in situation analysis. It starts with the key questions that a good food security and nutrition assessment is supposed to answer, and views them through the “lens” of their relevance for response analysis, as indicated in Table 1 below.

<table>
<thead>
<tr>
<th>Element of situation analysis / projection</th>
<th>Relevance for Response Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who is affected by the food insecurity?</td>
<td>Response target group can easily be identified thereby increasing the efficiency of intervention – e.g. which livelihood group and/or wealth group needs to be targeted for the response? Or is the affected group a pocket, population in a specific geographic area?</td>
</tr>
<tr>
<td>How severe is the problem (severity and magnitude of a problem)</td>
<td>This helps guide the nature and scale of responses. Is the situation very severe and therefore calls for emergency interventions, or is it not as severe and therefore non-emergency measures are more appropriate?</td>
</tr>
<tr>
<td>Why is there food insecurity?</td>
<td>This helps to identify the issues that are causing he assessed food insecurity/malnutrition problem – This understanding is critical for guiding responses to the various problems / causes identified, be they proximate, underlying or structural causes.</td>
</tr>
<tr>
<td>Vulnerability to adverse shocks and trends</td>
<td>An evaluation of the vulnerability parameters of the target group i.e. exposure to hazards and population’s ability to cope would also help guide the nature and scale of intervention. The implications for response are different according to the blending of current food or nutrition insecurity and vulnerability to possible shocks and trends.</td>
</tr>
<tr>
<td>Current polices, programmes and projects</td>
<td>Which policies, programmes and projects are in place? How are they affecting the situation?</td>
</tr>
</tbody>
</table>
The risk of future food insecurity

The risk of future food insecurity or malnutrition is defined as current vulnerability to adverse shocks and trends multiplied by the probability of the shock or threat occurring. This understanding also helps guide the nature and scale of intervention, helping to sharpen the information gained from the vulnerability analysis.

Applying this lens means gathering available information that addresses these elements/questions and making a judgment as to the adequacy of the information. Where the information is not adequate, the RAF offers certain tools as a way to "fill the gaps". Two of the key tools are problem and objective tree analysis and vulnerability analysis.

Problem analysis is an important tool for the RAF. In pilot work done so far, it has been found that a detailed problem analysis is often missing from existing food security and nutrition assessments and situation analyses. The RAF provides guidance on how to do a problem tree analysis for a particular population group in a particular area and how to turn this into an objective tree. Fig 2 below reproduces a problem tree developed in a RAF process for poor households in one livelihood zone in Somalia in August 2010.

Pilot work with the RAF has also uncovered the fact that the vulnerability of target populations is also sometimes not fully articulated in food security and nutrition assessments. Accordingly, the RAF has developed vulnerability - severity matrix which indicates certain general directions for response (see table 2 below).

**Figure 2: Problem tree example**
Table 2: Vulnerability–Food insecurity severity Matrix and response planning

<table>
<thead>
<tr>
<th>Current Food Security Status</th>
<th>Vulnerability of population group in Area of Analysis (e.g. poor households in livelihood zone X)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High vulnerability</td>
</tr>
<tr>
<td></td>
<td>Low vulnerability</td>
</tr>
<tr>
<td>Food Insecure</td>
<td>Address both current crisis and underlying causes concurrently</td>
</tr>
<tr>
<td></td>
<td>Prioritize emergency support to address current crisis</td>
</tr>
<tr>
<td>Food Secure</td>
<td>Prioritize addressing underlying problems, increasing disaster risk reduction/preparedness interventions, and early recovery</td>
</tr>
<tr>
<td></td>
<td>Prioritize interventions that strengthen resilience - development oriented</td>
</tr>
</tbody>
</table>

This matrix guides/assists analysts and programmers in identifying the areas to focus in terms of the interventions to be undertaken.

Once problems and vulnerabilities have been identified, it then becomes possible to start thinking about strategies to address these. In this part of the RAF, there are a few considerations which the pilot testing is currently attempting to incorporate – as explained in the following sub-section.

3.3 **Formulating strategies**

The first element is a deeper look at causality and problems. Here, response analysts are encouraged to try and prioritise particular problem chains or critical points in particular chains in terms of response. Work on this area is on-going, but the intention is to try and reach a degree of prioritisation in problem analysis as a precursor for a more nuanced and focused response analysis.

Building on this, the second element is to foster consensus around the kind of strategy that is most appropriate for particular population groups. So for example: having identified that the main food security issue facing poor agropastoralists in district X is low access to food due to low incomes (as opposed e.g. to lack of availability of food) and that this low income is a function of pest and disease attacks on a key cash crop (as opposed to poor livestock condition), this then implies a strategic thrust to improve incomes through increasing cash crop yields through pest management. It may be that this will take time to achieve, so in the interim it would need to be complemented by other options to increase purchasing power rapidly. The RAF attempts to foster discussions around these strategic issues which are then a precursor to more detailed planning and listing of response options.

3.4 **Matching the strategic direction of response with the planning framework.**

The next stage of the RAF involves tailoring the scope of response options and response objectives by the planning framework in question. If, for example, we are dealing with a one year planning timeframe, it is unlikely that response options which address structural problems will be top priority. This is not to say that they should not be addressed, on the
contrary. However, it may be preferable to focus on these structural issues in other related planning processes with longer term objectives\(^2\).

Referring to the problem tree identified in Figure 2 above, let us assume that the problem prioritisation process has identified that household food access is the main problem facing the population group in question. In this case, the response options selected should be those which are relevant to address the problems of reduced incomes and/or low household level food production and/or low food availability on the market for a certain proportion of the population. If, in addition to this it is known that the planning horizon is just 12 months, the options selected should reasonably be expected to demonstrate some impact within a one year time frame. With this in mind, some potential response options are as given in Table 3 below:

**Table 3: Identification of entry points and possible responses – some examples.**

<table>
<thead>
<tr>
<th>Option</th>
<th>Entry point and Addressing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash distributions</td>
<td>Proximate cause (reduced incomes)</td>
</tr>
<tr>
<td>Cash for work</td>
<td>Proximate cause (reduced incomes) and underlying causes (flooding due to degraded river banks and/or poor state of road infrastructure - through public works schemes)</td>
</tr>
<tr>
<td>Food aid</td>
<td>Outcome and proximate cause (low food crop production and low food availability);</td>
</tr>
<tr>
<td>Food for work</td>
<td>Outcome; proximate cause (low food crop production) and underlying causes (flooding due to degraded river banks and/or poor state of road infrastructure - through public works schemes)</td>
</tr>
<tr>
<td>Distribution of productive inputs</td>
<td>Underlying causes (land cultivation and productivity reduced)</td>
</tr>
<tr>
<td>Public works contracting</td>
<td>Underlying cause (degraded irrigation structures and silted water catchments)</td>
</tr>
<tr>
<td>Integrated Pest Management</td>
<td>Underlying cause (pest and diseases)</td>
</tr>
<tr>
<td>Distribution of pesticides and herbicides</td>
<td>Underlying cause (pests and diseases)</td>
</tr>
<tr>
<td>Participatory agricultural extension</td>
<td>Underlying cause (Poor knowledge and skills)</td>
</tr>
</tbody>
</table>

\(^2\) However, whatever the planning landscape, if the problem analysis indicates that different levels of problems are linked and depend on each other then the response analysis process should cover all relevant problems – although they may be addressed by different institutions and over different timeframes.
3.3 Response options identification and screening: The Response Analysis Matrix

In order to make the link with response planning, the RAF provides a tool for evaluating the appropriateness and feasibility of different response options. This tool is called the Response Analysis Matrix (RAM).

The **RAM** proceeds by requiring the response analyst to score response options against a range of criteria designed to judge appropriateness and feasibility. Options are then screened against the “Do No Harm” principle. The final output of the RAM is a set of options which have passed the tests of appropriateness, feasibility and do no harm. This set can then be fed into a proper response planning process which will include detailed design and budgeting questions outside of the scope of response analysis and the RAF.

3.3.1 Principles and Process

The RAM has been designed with four main principles in mind:

- **Consensus:** First and foremost, the RAM is a tool designed to generate debate, questioning and ultimately consensus around key characteristics of different response options.
- **Rigour:** As much as possible, the RAM draws on current best practice in terms of criteria for judging the appropriateness and feasibility of response options in relation to objectives. A scoring system is used to allow judgments to be made in a transparent and comparable manner. Guidance is provided for the scoring system in order to reduce the level of subjectivity.
- **Iteration:** The RAM is designed in such a way that response analysts are encouraged to think about ways of improving the scores under particular criteria for a given response option. For example: “how can an option be made more timely?” or “how can scale-up take place more quickly?” Through such questioning and debate amongst response analysts, different response options can be critiqued and more efficient ways of implementation may be found.
- **Flexibility:** While certain elements of the RAM are constant across situations, a degree of flexibility is built in to allow the tool to be adapted as necessary.

3.3.2 Appropriateness and Feasibility Criteria

The core elements of the RAM are applied to response options irrespective of the situation and kind of emergency. These are the core appropriateness and feasibility criteria and consist of the following:

- Technical Appropriateness (a)
- Timeliness (a)
- Technical / logistical capacity to carry out function (f)
- Probability of adverse impacts (a)
- Budgetary issues (f)

(a) = appropriateness criterion; (f) = feasibility criterion
In addition to these “core” criteria, a wide range of optional criteria are possible. These can be decided upon by response analysis stakeholders and can be tailored to individual circumstances. For example, in the Somalia context stakeholders felt it was important to include a criterion which explicitly looked at the extent to which a response option could be monitored and evaluated. In the context of Indonesia, a criterion which looked at rights and obligations upheld or affected by different options was included. Sustainability and replicability are other criteria which could be included.

Each response option is scored against each criterion on a scale of 1 to 5, with 1 being very appropriate / feasible and 5 being very inappropriate / unfeasible. When debating these scores, much depends on local knowledge of organisations, geographical areas, target groups and what has worked and not worked in the past and why. All these considerations need to be taken into account when applying the criteria to a particular option. In a sense, the criteria bring in various factors which are not specific to the option itself – e.g. which agency will actually be implementing it? is the budget available for that option X in area Y? Etc.

**Technical appropriateness**
This refers to whether the response option is “fit for purpose”. This is irrespective of it being very expensive, difficult to set up or with a lengthy period between implementation and impact. This consideration has received a lot of attention in the literature and there are several sources of information for particular types of interventions. The RAF gives links to these information sources and also provides short-hand guides to the key tools contained within them.

**Timeliness**
The key criterion here is: what is the likelihood of the intervention achieving significant impact within the time period (as defined by the objective and the planning horizon). For this criterion, the Response analyst should also use local knowledge of the area, timing and institution(s) involved in the implementation of the intervention (i.e. procurement, positioning, delivery and impact). Thus this criterion is not merely related to the type of intervention, but also the operational and contextual environment in which it will be implemented. When reviewing this criterion a number of supporting materials may come in handy. These include a seasonal calendar for the area and also a 3W matrix (who? what? where?) indicating the agencies operational in a given area.

**Technical/logistical capacity to carry out function**
The likelihood of an intervention having impact may also be related to the technical / logistical capacity to carry it out. The absence of capacity at sufficient scale to achieve

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4. The Emergency Market Mapping and Assessment (EMMA) tool (http://fex.ennonline.net/35/emergency.aspx)
required impact in a given geographical area / in relation to a particular population group / in a particular timeframe may not be an important issue, IF such capacity can be scaled up quickly. If scaling up is difficult then it does become an issue. Capacity issues may be highly location, time and agency specific, requiring local knowledge to make informed judgments.

**Probability of adverse impacts**
This answers the question: will the intervention have a negative impact on the intended target group or other groups and does this harm outweigh or nullify any benefits? Doing no harm is a core humanitarian principle. Harm in this case can refer to a range of negative consequences including environmental harm, potential for creating conflict, potential for creating dependency, potential for exacerbating inequalities and injustices.

**Budgetary Issues**
Are budgetary issues likely to compromise the implementation of the response option? This may or may not be related to the actual financial cost of the option. For example, it might be the case that the availability of funds for a particular type of programme are restricted due perhaps to a policy decision on the part of donors or government. Actual financial cost could be an issue for example in cases where difficult terrain makes mounting a response option very expensive. This issue may pose a bigger problem for certain options (e.g. those requiring a lot of road transport of materials) than others which are more service oriented – e.g. training. Local knowledge of particular areas, characteristics of different interventions as well as budgetary issues will be useful here.

### 3.3.3 Minimum standards of appropriateness and feasibility

The final stage of the RAM consists of a screening process (whereby options which appear particularly likely to be either inappropriate or unfeasible are **screened out** on the basis of high scores against one or more of the criteria. The remaining options can be said to have passed the minimum standards of appropriateness and feasibility and can therefore be considered for inclusion in response planning processes.

### 4. Key Questions for the On-Line Forum

**Question 1:** How would you see the RAF being applied in processes that you are or have been involved with? Do you think it would add value? If so why and if not, why not?

**Question 2:** To what extent do food security assessments and analysis normally cover the issues relevant to response analysis (see table 1 above for guidance). Where are the gaps, what are the reasons for the gaps and what can be done to address these?

**Question 3:** At what point should response analysis stop and response planning begin? As described in the background paper, does the RAF stray too far into detailed response planning questions, or put another way: in order to reach conclusions on the different criteria in the RAM, is it in fact necessary to know the detailed response planning questions first?
Question 4: What are the key criteria which should be used to determine the appropriateness and feasibility of response options?