Agreeing on causes of malnutrition for joint action

CONTENTS

FOREWORD

Malnutrition is the result of a complex set of interacting factors, usually related to consumption and access to food, health and sanitation, education, but also gender relations, social equity, and the local social and environmental context. Addressing malnutrition in a sustainable way and in all its forms – including stunting, wasting, micronutrient deficiencies and overweight – requires understanding what are the root causes at the level of the individual, the household, the community and the region.

There can be no "one size fits all" response, especially when it comes to interventions related to the food and agriculture system which are by nature context-specific. This is why improving nutrition and promoting sustainable diets require joint action at the local level, that builds on the local reality and local opportunities.

These guidelines propose a simple methodology for addressing a complex issue in an engaging way. Building on the well-known "problem tree – solution tree" planning method, these guidelines describe how to organize workshops which can be used for planning, training, and for team-building and strengthening alliances across disciplines and stakeholders.

Fighting malnutrition is at the heart of the Millenium Development Goals and the Zero Hunger Challenge and will continue to be central to the "Post-2015 development agenda" and Sustainable Development Goals. There is unprecedented commitment from a very wide range of stakeholders to improve nutrition, as illustrated by the growing number of countries and development partners joining the Scaling Up Nutrition Movement. FAO, together with other UN agencies, is actively engaged in making the aspiration of eradicating all forms of malnutrition a reality, in particular as part of the One UN through the REACH partnership and UN Joint Programmes.

These guidelines are meant to contribute to these joint efforts, by providing simple guidance for common planning and thus supporting joint implementation, monitoring and evaluation. We trust that these guidelines will be a practical tool for the creation and strengthening of effective partnerships for nutrition.

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INTRODUCTION

These guidelines for agreeing on causes of malnutrition for joint action are designed to assist professionals involved in development, emergency, and resilience building programmes who seek to promote integrated planning across sectors for sustainable improvements in nutrition.

The guidelines present a workshop methodology that uses a Problem and/or Solution Tree approach for:
- sensitization and training on nutrition, food security and livelihoods;
- strategic planning for integrated nutrition programmes;
- designing information and surveillance systems for nutrition and food security;
- developing partnerships for improving nutrition, food security and livelihoods.

The methodology provides a powerful way to strengthen participants' motivation to engage in joint action for nutrition. The exercise helps to "demystify" nutrition as participants realize that the work they do already contributes to improving nutrition and that the impact of their work can be increased through appropriate linkages and by filling identified gaps.

The workshop provide an opportunity for participants to learn from each other and to identify resource persons and initiatives that will be instrumental in transforming plans into action. The group dynamics that emerge during the workshop can strengthen working relations for future joint interventions.

This type of workshop is called "training-cum-planning" because participants learn about nutrition, food security and livelihoods concepts at the same time as they engage in planning.

South Sudan

In November 2012, the Food Security and Livelihoods Cluster in South Sudan requested technical assistance from FAO to identify ways of better integrating nutrition concerns in food security information systems and interventions. The FSLC, together with the Nutrition Cluster, organized a workshop with the cluster members and government representatives. The problem-solution tree methodology enabled participants to identify jointly opportunities to better integrate existing food security and nutrition surveillance systems, to strengthen synergies between different sectoral interventions, and to identify gaps in terms of information (e.g. lack of understanding on feeding practices amongst different livelihoods and cultural groups) and interventions (e.g. insufficient nutrition education and support to certain groups such as fishing communities).

Why do we need joint planning for nutrition, food security and livelihoods?

Many different factors shape the nutrition situation of households and individuals. Food availability and access to food, health and education all have a major impact on nutrition. But social and gender relations, environmental conditions, infrastructure, the local economy and the political situation also affect people's nutrition. These factors interact in a variety of ways depending on the context and livelihoods of households.

Because the factors affecting nutrition are multiple and diverse, interventions that address malnutrition need to be multi-sectoral and integrated. This requires joint action. Shared understanding of the local causes of malnutrition is the foundation for sound planning and effective partnerships.

There have been a great many initiatives related to nutrition, food security and livelihoods and there is now a wealth of experience in the field. But all too often, linkages among interventions and stakeholders are limited and, as a result, the individual and collective impact of programmes on nutrition remains weak. Experience shows that a coordinated approach will have a stronger impact.

Nutrition and resilience: opportunities for synergies

Multi-sectoral efforts to reduce malnutrition are closely related to the resilience agenda, as good nutrition is a key input for individuals' and households' resilience and should be an outcome of resilience-building programmes.

Using an analysis of the causes of malnutrition by livelihoods groups is an effective entry point for the design of resilience-building programmes: it ensures planning is focused on people's needs, adopts a multi-sectoral approach, and includes a comprehensive set of interventions that address people's immediate and more long-term needs.

The present guidelines can thus help apply the concepts of resilience and adopt a nutrition lens in planning, in a practical way which is accessible to field practitioners from various backgrounds and levels of training.

Joint planning for nutrition, food security and livelihoods is of particular relevance for countries who have committed to fight malnutrition through multi-sectoral and multi-stakeholder approaches, such as the members of the Scaling Up Nutrition Movement. The methodology presented here is also very relevant for the design of resilience-building strategies, as it helps identify both immediate and longer-term solutions to malnutrition and food insecurity.

To support such efforts, the capacity of professionals involved in development and emergencies to work together on nutrition, food security and livelihoods must be strengthened. The workshop methodology presented in these guidelines has been developed in response to this need. These guidelines can also assist organisations

which are interested to enhance the nutritional impact of food and agriculture programme by applying the Key Recommendations for Improving Nutrition through Agriculture (see Annexe 1).

Food and Nutrition Security in the Global Development Agenda

Raising levels of nutrition is essential to fighting poverty, and reaching national and global development goals. Good nutrition protects and promotes health, reduces mortality, especially among mothers and children, and encourages and enables children to attend and benefit from school. Good nutrition is essential for individuals of all ages to be healthy and productive, and thus contribute to the economic growth and social development of their country. Conversely, malnutrition in all its forms has huge economic and social costs for families and nations.

Improving food and nutrition security requires comprehensive multi-sectoral strategies involving government institutions, civil society, NGOs, donors, UN agencies and the private sector. Organizations and individuals from around the world are aligning their efforts in answer to the call from the UN Secretary General to meet the "**Zero Hunger Challenge**" to ensure that every man, woman and child enjoy their Right to Adequate Food; women are empowered; priority is given to family farming; and food systems everywhere are sustainable and resilient. A growing number of countries (45 in October 2013) are putting nutrition at the top of their development agenda by joining the **Scaling Up Nutrition (SUN) Movement**. These countries are committed to reducing malnutrition through multi-sectoral strategies that address the immediate and underlying causes of malnutrition. They are supported in their efforts by members of the SUN civil society, UN, donor and business networks. At country level, the UN supports efforts to strengthen multi-sectoral coordination efforts for nutrition through the REACH (Renewed Efforts Against Child Hunger) Partnership. Accelerating reductions in malnutrition also requires mainstreaming nutrition objectives and strategies in food and agriculture policies and interventions at regional and country levels, such as the Comprehensive African Agriculture Development Programme (CAADP) in Africa.

How to use these guidelines

The guidelines present a workshop methodology that is:
- a flexible tool that can be used to achieve a variety of objectives, depending on the context and local needs;
- adaptable to different audiences and different time frames; and
- based on the elaboration of problem and solution trees.

The guidelines are divided into several parts:

Part One guides you in:
- clarifying the objectives you wish to achieve by organizing and running a workshop;
- deciding the level at which to organize it (e.g. regional, national, sub-national); and
- determining the time you will need to complete it.
  Part One also provides examples of how the methodology has been used in a diversity of contexts.

Part Two provides step-by-step guidance on how to organize a "training-cum-planning" workshop that is designed to facilitate strategic planning for integrated nutrition programmes at a decentralized level (province or district). Detailed advice is given on how to prepare for the workshop, run it and organize follow-up.

Part Three explains how the workshop methodology can be adapted to different objectives, varying levels of intervention (regional, national, sub-national) and diverse time frames.

What are problem and solution trees?

Problem and/or solution trees represent a powerful visualization technique for consensus building and participatory problem solving. How does this technique work?

Participants identify the causes of a problem and organize them according to cause-effect relationships.

Using a specially constructed "problem tree" as a starting point, participants identify solutions by constructing a "solution tree" that constitutes a reverse image of the problem tree.

Problem and solution trees are relatively simple to use, easy to adapt to different needs and situations. They allow for the incisive participation of people from differing technical and socio-cultural backgrounds and are an effective way of synthesizing a wealth of information and experience. Examples of problem and solution trees are given in Part two, the **working group session**.

Senegal

The Problem and/or Solution Tree methodology for integrating nutritional concerns into forestry programmes and projects was first developed and tested at a workshop in Thiès, Senegal, in July 1996. The workshop brought together officers from the central, regional and provincial levels of the Senegal Forestry Department and experts from other disciplines including health, sociology, communications and food technology.The groups identified and prioritized the causes of malnutrition in their zone. From this analysis each group drew up a "problem tree", which was then turned into a "solution tree". In this way it was possible to clarify and prioritize aims and activities with a view to improving the food and nutrition situation in the zone. This methodology enabled participants to pinpoint concrete interventions that they had not thought of before. Once the participants had drawn up a strategic framework for improving the food and nutrition situation, they were able to specify first what they could do, and then who could or should do the rest. They also became aware of the need for an effective coordination framework.

PART ONE.
CLARIFYING THE OBJECTIVES

What am I trying to achieve?

The workshop can be designed and facilitated so as to achieve one or several of the objectives listed below, keeping in mind that participants usually include development and/or emergency professionals working in a diversity of sectors (agriculture, health, rural development, education, social affairs, women's affairs) that are key to conserving and promoting good nutrition.

Objectives related to sensitization and training

- To develop a better understanding of the local food and nutrition situation, the principal causes of malnutrition and how these are related to people's livelihoods.
- To clarify the basic concepts of nutrition, food security and livelihoods and relate them to the local situation.
- To sensitize professionals from various sectors and institutions as to their role in improving nutrition and on how to integrate nutrition into their projects and programmes.
- To strengthen the capacity of local institutions in nutrition programming.

Objectives related to joint planning and coordination

- To identify ways of working together for alleviating malnutrition in a selected area and to lay the foundation for the development of a regional, national, provincial or district level strategy for improving food security, nutrition and livelihoods.
- To lay the foundations for effective inter-agency and multi-sectoral collaboration for improving food security, nutrition and livelihoods.

Rwanda

In 1997, WFP asked FAO to train its staff and that of counterpart institutions in Rwanda in food security and nutrition. Personnel from other UN agencies, government staff from health, agriculture and education departments and representatives from key NGOs also participated. Participants pooled knowledge and information and revisited their activities and programmes. This training proved crucial to evidencing the major impact of HIV/AIDS on people's food security and nutrition and led FAO to initiate normative work in that area.

Design of nutrition and food security information systems

- To identify indicators that will make it possible to monitor the food and nutrition situation, to improve data collection methods, and to lay the foundations for a comprehensive analysis of the nutrition situation.

- To identify indicators to be included in the monitoring and evaluation system of nutrition-related projects or programmes.

In most instances, one workshop can fulfil several objectives. Training is usually an inherent component since participants learn about basic concepts of nutrition, food security and livelihoods as they are engaged in planning or designing a surveillance system. This is why these workshops are sometimes referred to as "training-cum-planning" workshops.

Regardless of the objectives chosen, the workshop will strengthen relations among participants and establish bridges across sectors and institutions.

Burundi and Congo DRC

Congo DRC

Within the context of a FAO technical cooperation project to assist the Ministry of Agriculture in setting up a Food Security and Nutrition Information system (June 1998), a two-day food security and nutrition workshop was organized in Kinshasa to lay the groundwork for a local information network. Participants from different institutional backgrounds identified the most food insecure groups and individuals, agreed on a typology of the most food-insecure, built a causality model of malnutrition for each group, identified for each cause an appropriate indicator and discussed pragmatic arrangements for collecting, analysing and disseminating the information to inform appropriate decision-making at provincial and national levels.

Burundi

A similar approach was adopted in Burundi at the request of and with financial support from UNICEF/Burundi. In October 1998, FAO assisted in organizing an inter-agency workshop on Nutrition and Household Food Security, where government staff and NGOs identified specific indicators for the main food-insecure groups and agreed on the requirements and modalities for provincial local food security and nutrition information systems. One of the outcomes of the workshop was the strengthening of linkages between national institutions and international NGO staff.

At what level should I hold the workshop?

The workshop methodology can be used at the regional, national, provincial, district and even at the community level. It is therefore important to define the geographical area to be covered by the planning exercise. This will be determined by the objectives you wish to reach and the audience you have decided to target.

Part Two of these guidelines provides detailed guidance on how to organize a workshop at the provincial or district level, as a tool for decentralized planning and alliance building. But the methodology can also be adapted to other levels of action. Part Three gives advice and examples of how it can be adapted for use at regional and national levels as well as at the community-level.

Afghanistan

In May 2002, FAO, in collaboration with other UN agencies, organized a first workshop in Kabul to raise the awareness of key actors on food security and nutrition challenges in the country and generate a better understanding of what could be done. This workshop, which brought together men and women from different sectoral backgrounds, was successful in initiating a dialogue and laying the foundation for future collaboration. Similar workshops were later organized at the provincial level (Bamiyan, Herat, Jalalabad, Kandahar) to raise awareness and contribute to joint capacity development of local institutions. The methodology was also used with different Ministry of Agriculture departments to help staff identify how to design agriculture-related strategies that can address undernutrition. The workshops led to the identification of two principal strategies: the first focused on promoting home-based food production, including food processing, for winter consumption; the second focused on marketing and on developing market access to sell produce and access food and other basic items.

How much time do I need?

The time needed to conduct a workshop will depend on the objectives you wish to achieve, the level and type of experience of the participants and the time that is available. While a workshop can last up to five days (for example, in the case of training), it is rare for programme managers and planners to be available for more than two days. Part Two of these guidelines shows how a workshop can be organized in two full days. This is the minimum time required for a thorough planning process. However, an experienced facilitator can adapt the methodology to even shorter time frames, using certain shortcuts if circumstances make it difficult to mobilize participants for two full days. Guidance on how to adapt the methodology to different time frames is provided in Part Three.

PART TWO.
ORGANIZING A TRAINING-
CUM-PLANNING WORKSHOP

Preparing for the workshop

Given the variety of tasks required to prepare a workshop adequately, it is advisable to arrange a preliminary visit to the area where the workshop will be held, preferably two to three weeks before the scheduled date. A locally-based colleague or partner can also supervise the preparations in the run-up to the event.

Selecting participants

The success of the methodology will ultimately depend on the selection of participants. It is important to involve professionals from a wide range of sectors and organisations, with strong commitment to and involvement in decision-making and programme management. Participants should also have strong field experience and a good understanding of local needs, such as monitoring staff, extension workers, and community mobilizers.

Representatives of local government working in agriculture, rural development, water management, public health, education, women's affairs, youth affairs and other relevant fields should be invited to the workshop, as should representatives of Civil Society Organisations (CSO), national and international NGOs and UN agencies active in the area.

Depending on the context and on workshop objectives, it could also be appropriate and beneficial to invite community members, such as community leaders, teachers or health workers. The gender balance among participants should be respected as far as local circumstances permit.

It is important that the workshop setting allow all participants to feel comfortable enough to express themselves freely. The venue should be easily accessible and not too intimidating for participants. Discussions should be held in the main language(s) spoken by participants and/or appropriate translation services must be available.

Additionally, efforts should be made to ensure that all institutions implementing or supporting community-level projects and programmes (development or emergencies) are represented, in order to:

- identify and capitalize on existing resources, experience and information;
- provide a basis for an inter-institutional planning and implementation mechanism;
- ensure that an interdisciplinary outlook will be preserved at the local level during implementation.

Local coordination offices that maintain databases of local stakeholders can be of assistance in preparing the list of participants. If you use contact lists provided by local coordination offices, remember to provide these offices with useful feedback regarding outdated contacts, incorrect emails, new stakeholders, and so forth.

The ideal number of participants is between 20 and 35; having too few people limits the wealth of experience and perspectives that can be shared; having too many makes it difficult for each individual to participate actively and to facilitate shared discussions.

Try to ensure that participants are staff members, people with decision-making and planning responsibilities and programme managers who will be in a position to provide feedback to their organisations in the weeks and months after the workshop and to make sure that there is follow-up on agreed decisions.

Informing and inviting participants

It is important to work together with local government officials, starting from the early preparatory stages. These officials should include your organisation's main partners and counterparts as well as the provincial or district governor or deputy governor. He or she can play an essential role in emphasizing that nutrition is a concern for all development partners and in convening all the relevant participants. Ideally, the governor or main government representative in the area can open the workshop. If this is not possible, the governor can be replaced by another relevant high-ranking official, preferably from the governor's office or a department of planning with cross-sectoral functions.

In order to enlist the support of other officials, it can be useful to meet them personally and provide them with a written summary in the local language (or languages) of what the workshop is about.

It is also recommendable to meet representatives of the various organisations that are invited so as to:
- explain the workshop's objectives;
- listen to any suggestions they may have regarding the agenda, the participants selected and the workshop process itself;
- ensure that appropriate persons will be on hand to represent the organisation during the workshop (namely, decision-makers and personnel with strong field experience).

Following these meetings, a letter of invitation should be sent out, explaining the background to the decision to hold the workshop, its objectives, the name and/or profile of participants, the venue, time and date.

In the case of a workshop organised in a district or province, for example, invitations ideally should be sent out from the governor's office and/or be sent out as joint invitations from the governor's office, any other lead government department and your own organisation.
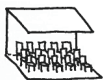
Selecting the venue

The venue should include a plenary room large enough to accommodate all participants, ideally from 25 to 35 persons, as well as two alternative spaces for working groups composed of from six to eight persons. Electricity is not indispensable, but at least one wall and some structure to provide protection from wind and rain are essential. The venue should be large enough to allow three to four groups to hold discussions without disturbing the others and enough wall space to display at least two large sheets of paper: one for the problem tree, one for the solution tree.

Given the multi-sectoral dimension of the workshop, it is advisable that the venue selected be that of a local coordination office, such as the governor's office, or another neutral venue, such as a hotel conference room. Alternatively, the venue can be located in a relevant ministry or in the office of a UN agency or NGO. The choice of venue should be discussed with local officials.

Preparing supplies

√ 6 sheets of brown wrapping paper (2m x 1.50 m) or 12-18 large flipchart sheets;
√ 3 rolls of white masking tape;
√ triangular-tipped paper markers (one per participant);
√ cards made from heavy drawing paper, preferably of two colours (one for the problem trees, one for the solution trees). These can be cut on order from A4 sheets by most stationary shops. Plan approximately 10 cards of each colour per participant; and
√ a flip chart stand.

Check if supplies are available locally. If not, they will have to be brought from the nearest city. Wrapping paper can usually be purchased at the market, while flipchart paper, masking tape, drawing paper and markers can usually be found in stationary stores. The wrapping paper or flipchart sheets will be used as spaces to construct problem and solution trees. They should be set-up on the venue walls before participants arrive.

Meals: Plan refreshments and meals according to the local customs, including morning and afternoon tea or coffee and lunch.

Mobilizing and training facilitators

The workshop should be conducted by a lead facilitator with experience of nutrition and food security issues who is familiar with the problem and/or solution tree methodology and who has good facilitation skills.

In addition, three or four group facilitators need to be identified before the workshop begins and trained during a simulation exercise by the workshop facilitator. It is advisable that the group facilitators have technical expertise related to nutrition and food security and are in a position to remain neutral during discussions. It is very important that facilitators go through the process of building a problem and solution tree before the workshop. Should the workshop be held in two languages (e.g. English and a local language), the group facilitators should be bilingual; this will allow the various participants to interact in the language that they feel most familiar with, while limiting the need for translation and thus keeping the process fluid.

During the workshop, the lead facilitator will move from group to group to support each one as needed and to make sure all groups are on track.

Communication regarding the event

Local press and TV should be contacted because they generally give good coverage to workshops and other local activities. Publicizing the event adequately can also contribute to strengthening political commitment for the workshop's conclusions and to building interest in nutrition among the local population. In order to effectively communicate about and during the event, it is important to prepare clear and coherent messages that are appropriate for the media that you use and which are adapted for the target audience.

Running a training-cum-planning workshop

The workshop agenda combines plenary sessions with group work. The workshop sessions described below can be held over two days or more. An example of a workshop agenda is presented in Annexe 2.

The plenary sessions provide an opportunity for participants to get to know one another and to share local competencies and experience. They are also an opportunity for providing locally relevant information to participants, especially since they come from a variety of institutional and technical backgrounds. When appropriate, the workshop facilitators can insert the necessary theoretical training inputs on nutrition, food security and livelihoods into the participatory problem-solving process, making extensive use of visualization techniques to encourage participation.

Introductory plenary session

The first plenary session introduces the theme of the workshop and lasts approximately half a day.

» **Step 1: Introduction**

This step includes introductory speeches by relevant local authorities (such as the regional governor), the introduction of participants, and a presentation by the lead facilitator of the workshop's objectives and agenda. The speeches and the presentation should explain the rationale for conducting the workshop and describe linkages to local events or planning processes.

» **Step 2: Discussion on the nutrition situation in the relevant area.**

The lead facilitator can start a discussion on the nutrition situation by asking participants: "Is there malnutrition in your area? Who is most affected by it? (This can refer to age groups, gender, socio-economic or livelihoods groups). What are the consequences? How does it manifest itself?" It is best to avoid discussing causes at this point, in order not to pre-empt or bias the participatory group work that will come later.

The main points made should be written on the paperboard for future reference. It is preferable to ask participants what they know about nutrition before providing definitions so as to assess their understanding of the different types of malnutrition and identify local perceptions of malnutrition.
The facilitator can then clarify the key concepts, should they be unfamiliar to participants, namely:
- chronic and acute undernutrition
- micronutrient deficiencies
- food security
- livelihoods and livelihoods groups

Definitions of key terms are provided in Annexe 3.

The discussion can then be completed by a brief presentation of available nutritional data for the area (for example, rates of wasting, stunting and micronutrient deficiencies). This can be done by one of the participants or by a resource person.

» **Step 3: Discussion on feeding practices**
Participants should then be asked to discuss household diets and feeding practices in the province (number and composition of meals, seasonal variation, evolution, child feeding, etc.). This will allow the facilitator to bring out basic notions about balanced diets, child feeding, food sources in the area, changes in food patterns, and so on. Again, the main points should be written on the flipchart for future reference.

» **Step 4: Identification of the most vulnerable livelihood groups as a basis for the group's deliberations**
At this point, the participants will be asked to identify, based on their personal experience, the most vulnerable livelihood groups in the area. The facilitator can ask leading questions such as: "Which population groups are most affected by malnutrition? What are their characteristics? Where do they live? Are their diets different from other groups, and if so, how?" The facilitator can also introduce the notion of vulnerability (see definition of vulnerability in the glossary in Annexe 3). For the purpose of the planning session, participants will be asked to agree on three to four main livelihood groups.

First working group session: Malnutrition Problem Trees

Participants break up into three or four groups (one for each livelihood group) of about six to ten participants, each led by a group facilitator. Since the working group process is designed to elaborate a micro-planning process for nutrition, food security and livelihoods, it is important that: 1) participants are familiar with the livelihood group under consideration; and 2) that the group is interdisciplinary, inter-institutional and gender-balanced. Participants should choose the group they wish to be part of, but facilitators can also suggest that some individuals change groups to ensure optimal group composition.

As mentioned above, each group should have enough physical space to hold discussions without disturbing the others and enough wall space to display at least two large sheets of paper: one for the problem tree, one for the solution tree. These sheets should be set-up before the beginning of the workshop.

The first working group session concentrates on building a causality model for malnutrition for each of the livelihood groups identified. A good way to initiate the discussion is to clarify the main characteristics of the livelihoods group being discussed. For example, a key feature that distinguishes pastoralists from other livelihood groups and determines many aspects of their food system and livelihoods is their mobility.

The facilitators can use the following steps to build a satisfactory problem tree:

- Place one card labelled "Malnutrition" at the bottom of a large sheet.
- Distribute cards cut from sheets of heavy drawing paper (of one colour only) and a marker to each participant. Ask the participants to write on the cards which they think are the main causes of malnutrition for that specific livelihood group. They should write:
    - ◊ one cause per card
    - ◊ in capital letters
   - ◊ negative phrases of no more than 3 to 4 words

If more than one language is used, participants should be encouraged to write the cards in the two main languages. It is important that the lead facilitator be able to read the cards.

The facilitator should make sure participants do not formulate causes of malnutrition as "absent solutions" (for example, a lack of this or that), because the absence of a corrective intervention, while regrettable, is in no way the same thing as the cause of the problem. For example "lack of nutrition education" should be formulated instead as "inappropriate awareness about feeding practices". This is important because when the group will come to solutions, the facilitator should encourage creativity and analysis. Thus, while the promotion of nutrition education can be one solution to the problem of inadequate nutrition education, it is by no means the only one. Others might include strengthening peer support to mothers, for example. This will ensure that the solution tree is as comprehensive, locally pertinent, and imaginative as possible.

- When the participants have completed their cards, ask them to gather up all the cards and get rid of any duplicates. Sometimes two cards use different words to say practically the same thing. In this case, one card should be removed, or the two combined onto one card.
- Cluster the cards by theme, e.g. health issues, agricultural issues, employment issues, education issues.
- Using participants' suggestions, start placing the cards into a problem tree, The role of the facilitator is to stimulate discussion and debate and not that of building the tree by him or herself! Make sure everyone is participating. The group facilitators should assist participants in combining the cards into a well-structured problem

tree. It is essential to make sure that there is a good logical sequence between causes and effects; otherwise, it makes it very difficult to build a meaningful solution tree and thus in developing an effective strategy.

- Place the cards in the tree starting from the bottom-up. Causes are placed just above the problem they are believed to cause. Make sure the opposite is not done, as it is common for participants to confuse causes and effects. For example:
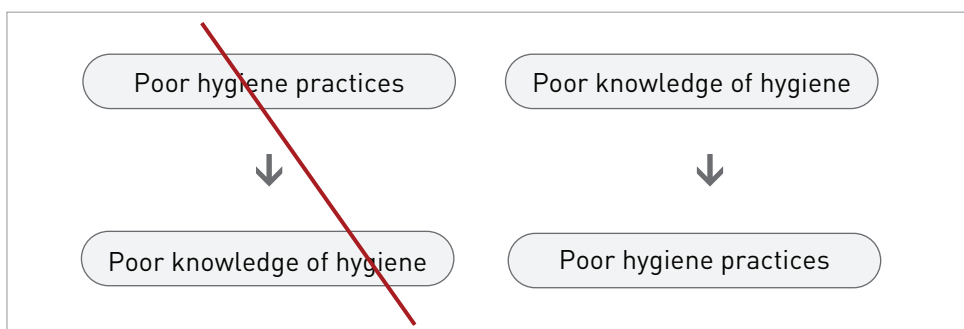
- One problem can have several causes. In such cases, the causes should be placed in the same line (that is, on the same level), above the problem. For example:
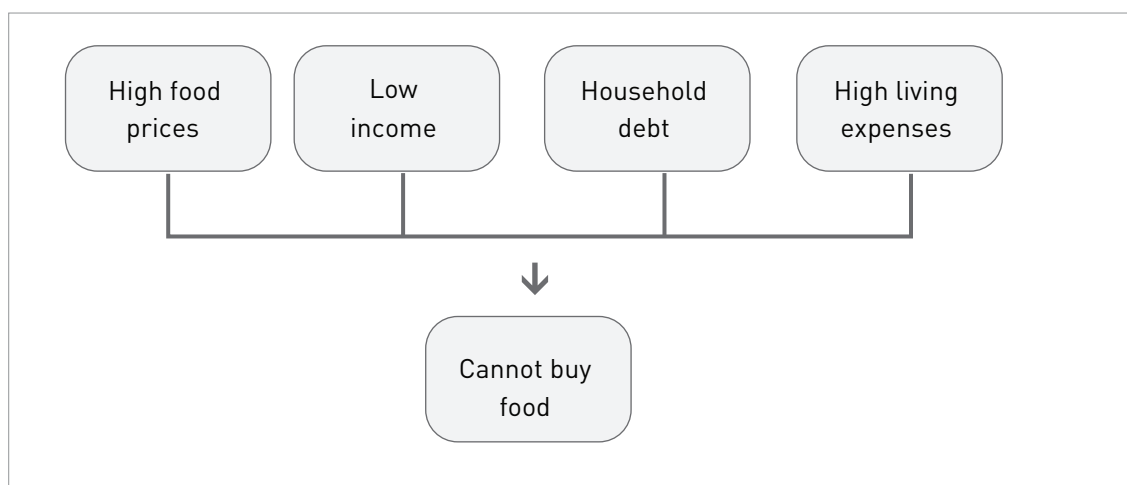
- Make sure there are no missing links in a causal chain. In such cases, you may need to add a card. For example:
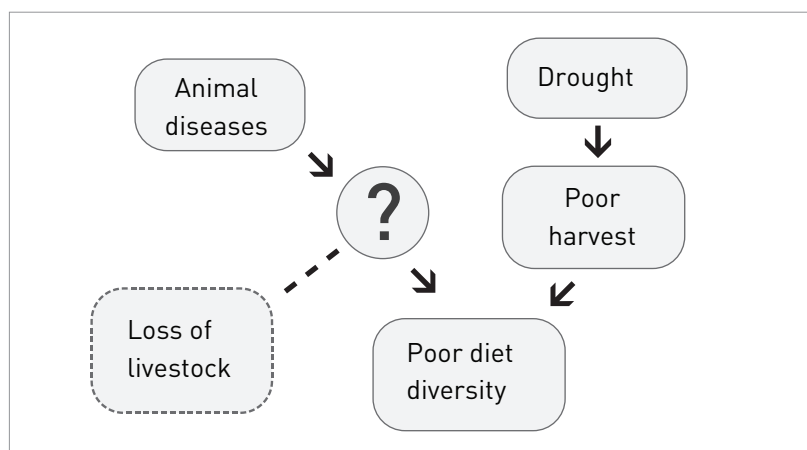
- Avoid generic causes such as "culture" or "gender" - invite participants to be specific about which aspects of culture or gender relations impact nutrition and how.
- Once the cards are placed in the tree, review the tree as a whole to make sure there are no illogical sequences and no missing links or cards. You can draw arrows between the cards to clarify the causal links.
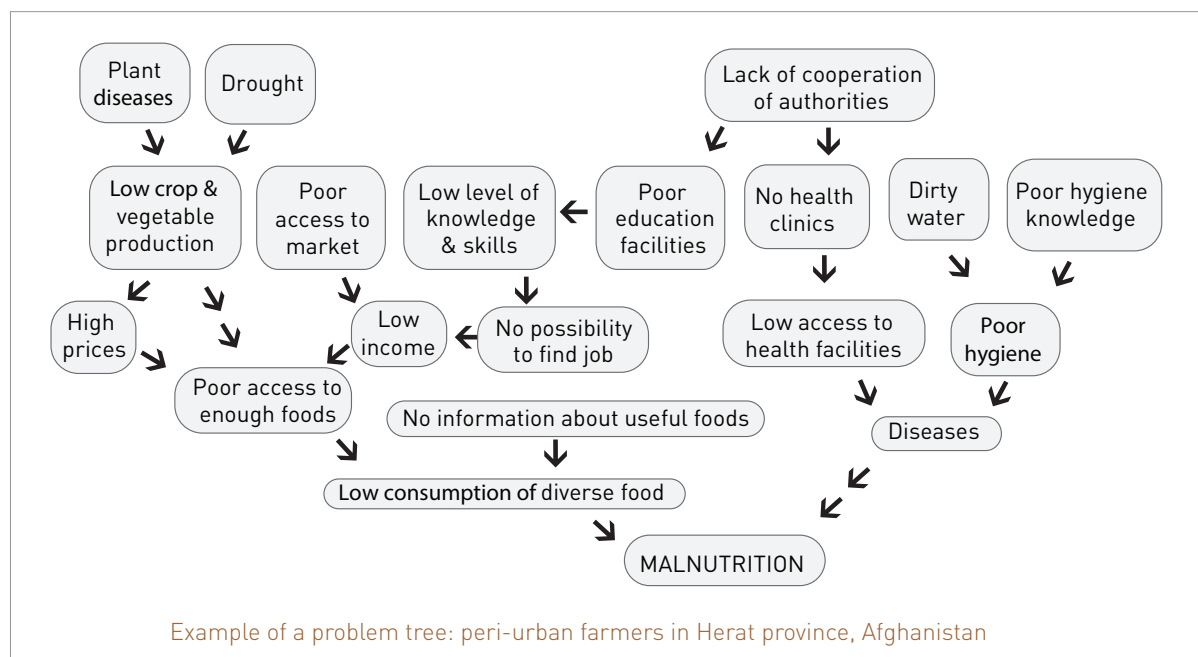
Example of a problem tree: peri-urban farmers in Herat province, Afghanistan

Note: there is no single model of a correctly designed tree. The position of the cards is always open to debate. Different participants may have different perceptions and, indeed, the cards can be moved around on the "branches" of the tree until agreement is reached. The facilitator's role is to help participants come to an agreement, while ensuring that the "logic" of the tree be respected. The cards closest to the 'malnutrition' card should refer to the immediate causes of malnutrition which operate at the level of individuals, i.e. poor food consumption and disease. These are affected by causes that operate at household level, and beyond that, at community and regional levels. At the top of the tree are broad causes such as "climate change" and "war", which affect several components of the system and can thus be linked to several causal chains.

The group facilitator, assisted by the workshop facilitator, can highlight important themes that may not have been sufficiently emphasized by the group members, such as environmental factors and gender-specific causes of malnutrition. Also, depending on the composition of the group, some parts of the tree may be incomplete. If participants come largely from the agriculture sector, for example, the health aspects may be insufficiently addressed.

This process allows for active discussion, for the addition of other causes as needed and for clarification of the logical links between causes and effects. The group selects a presenter for reporting back to the rest of the participants.

The problem trees are presented and discussed in their location, allowing further technical feedback from the workshop facilitator and further inputs from the other groups.

By the end of this session, participants will have become familiar with the concepts of nutrition and its multiple, direct and indirect causes, in particular with the roles played by household food security, health, education, cultural practices, environmental management and so on. A common vision of the local nutrition, food security and livelihoods situation will have emerged.

At this stage of the process, presentations on relevant topics, such as food security and livelihoods assessments and vulnerability analyses, can be inserted. They will serve to validate, complement and expand further the thinking process that has been initiated.

Caution: These presentations should by no means be made **before** the group sessions in order not to introduce bias into later discussions or to alter the group dynamics.

It should be remembered that the discussions that follow the presentations of the problem trees and the first assessment results can be an opportunity to identify areas where participants are uninformed and to determine which further information is needed to ensure that the planning process will be sufficiently thorough.

Second working group session: Malnutrition Solution Trees

At the beginning of the second working group session, each group will be allowed to modify its causality model (that is, its problem tree) and incorporate into it the feedback it deems relevant. It will then proceed to build a "solution tree", translating each negative card into a positive solution. The solution tree thus becomes the reverse image of the problem tree.

In this stage, the cards in the solution trees are simply the opposite of the cards in the problem tree. But there is more to come.
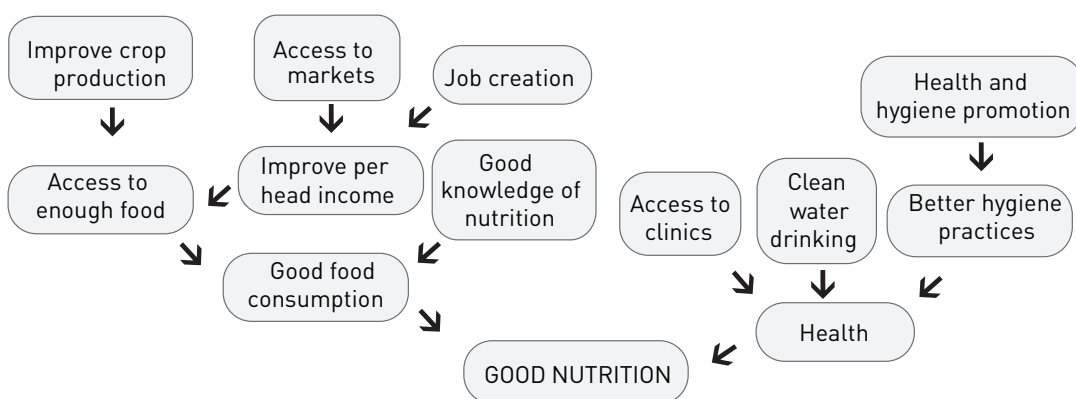
Example of a solution tree: peri-urban farmers in Herat, Afghanistan

Once a solution card has been prepared for each problem card, additional cards must be added, specifying the more specific and detailed interventions required to achieve the solutions and objectives desired.

It is essential to ensure that such interventions always correspond to an agreed-upon cause of malnutrition, rather than to what participants are used to doing or are already doing. Note: in some cases, elaborating the solution tree leads to the identification of a gap or an incomplete sequence in the problem tree. It is possible to "fix" the problem tree at any time.

Example of solution tree with interventions (Herat, Afghanistan)
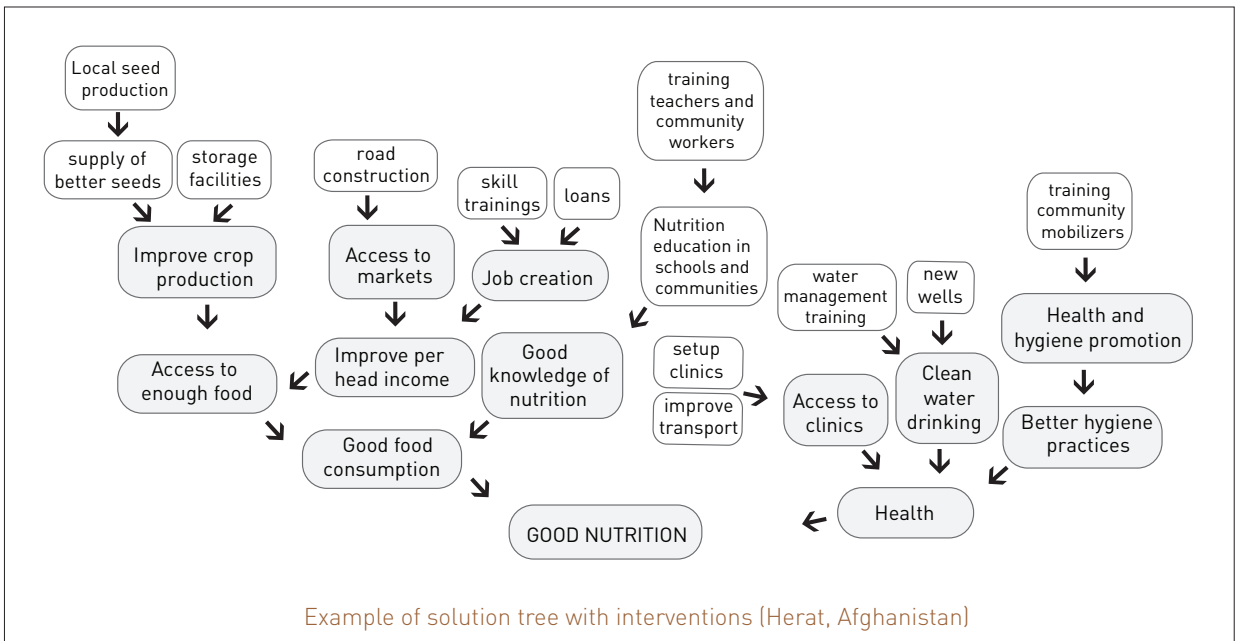
For each of the identified solutions, the group must identify the institution(s) that has(ve) the mandate and/or expertise to implement the proposed intervention:

Example of solution tree with stakeholders (Herat, Afghanistan)
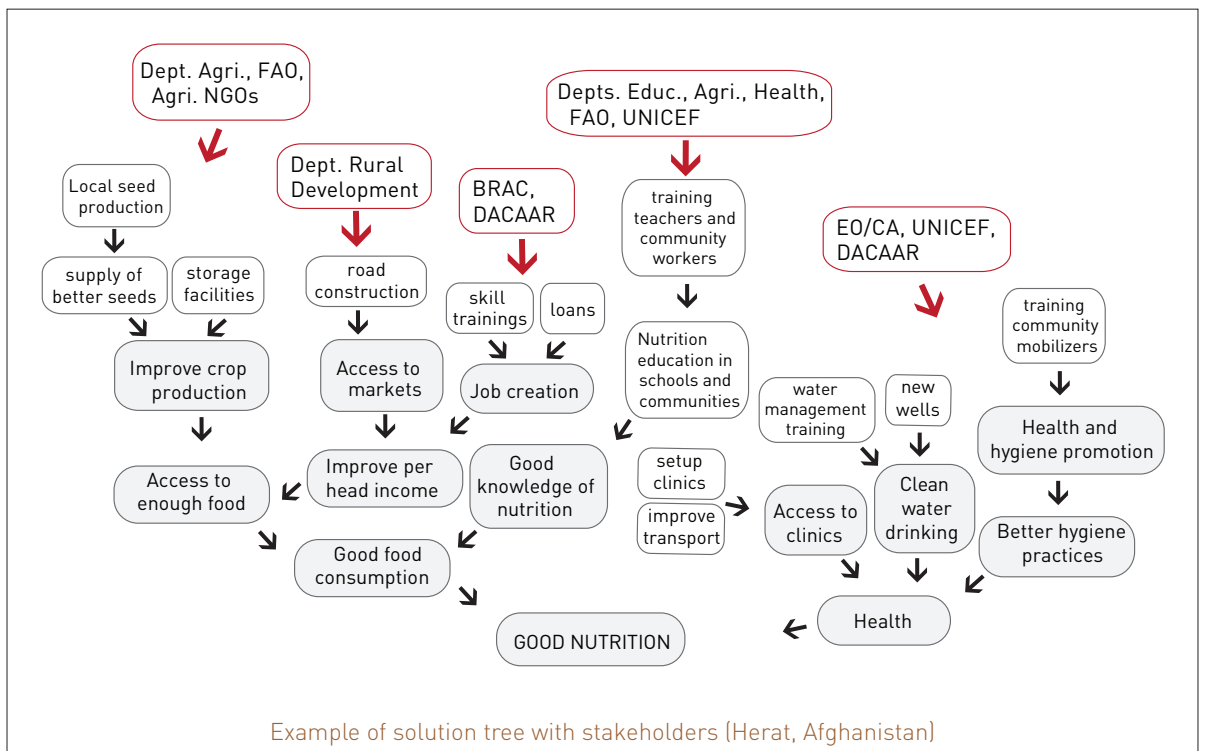
In some instances, solutions to identified problems can involve strengthening linkages across livelihood groups. For example, fostering trade between pastoralists and agriculturalists can help improve consumption of dairy products among the latter, and of vegetables among the former.

Solutions to the broader issues (e.g. climate change, war…) may be beyond what participating organizations can do, but groups should consider the inclusion of mitigation strategies as part of identified interventions (e.g. conservation agriculture; conflict-sensitive planning…).

The solution trees are then presented and discussed with all participants. At the end of this third plenary session, the foundation for a local strategy for food security, nutrition and livelihoods will have emerged.

At this stage, and not before, presentations on relevant interventions designed to integrate agriculture, health and other sectors with nutrition, food security and livelihoods can be made by the participating implementing agencies.

Action-Planning session

The final phase of the workshop will concentrate on joint planning for follow-up work at the national, provincial, district and community levels. Participants representing institutions working in the same geographical area can be asked to convene in small groups and to discuss the possible implications for their activities of the joint planning process. The solution trees will have highlighted many actions that can be taken. Some of them may already be implemented, others not. It is this session that will provide the opportunity to identify gaps as well as give participants the chance to strengthen existing projects and to integrate into them new activities that will further enhance their impact on nutrition.
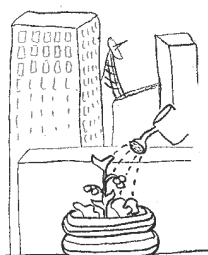
A representative from each group will then present to the plenary ideas about what the group members would like to do, and where and how they intend to coordinate. It is at this time that participants should also define what assistance they think they would need from the provincial/area level.

Note: It is important for the lead facilitator to get participants to think carefully about what is really feasible with the use of existing resources and small start-up funds, if the latter are available.
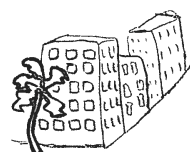
The main points and the follow-up actions that have been agreed upon should be summarized by the lead facilitator (preferably on a paperboard for all to read) and validated by all participants. A memo can be prepared outlining:
- the technical areas requiring attention;
- who is taking responsability for what;
- what resources are required;
- what should be done, by when and where,
- immediate next steps.

Follow-up to the workshop

The workshop is a first step to a joint planning process. It is important to maintain momentum through adequate follow-up.

The first task is to prepare a workshop report and disseminate it widely to all relevant stakeholders in the area (and possibly at the level of central government, if appropriate). The report should include a summary of the plenary discussions, the problem and solution trees prepared by each group (preferably typed), and the main conclusions and follow-up points. In addition to the report, the following steps may be considered:
- individual meetings with government authorities to assess and strengthen the political commitment to provide follow-up to the actions proposed;
- meetings with the main institutions and agencies working at the community level to clarify their action plans, provide support to them (if necessary) in completing their work plans, and to ensure coordination and harmonization among the various agencies;
- consultations with local communities in the field to discuss how the workshop's principal recommendations can be applied locally and also to receive feedback from community representatives;
- training for relevant agency staff in areas where activities are to be implemented (e.g. on nutrition education; food production, etc.); and
- contacting local donors to assess their interest in funding one or more of the identified activities.

Setting up a working group or task force to follow-up on the proposed actions is an excellent way to ensure that the workshop leads to a genuine joint planning mechanism and to implementation of the proposed interventions. This task force, or working group, should schedule regular meetings with workshop participants and/or other relevant organisations. This requires considerable capacity, sufficient staff time and strong commitment. Another means of continuing the joint planning process is to link it to another already existing working group or coordination mechanism.

Follow-up should also include ways to evaluate and measure the impact of the joint planning mechanism and the activities identified by it.

Finally, it is important to institutionalize the joint planning mechanism in the nutrition, food security and livelihoods sector. One way to do this is to incorporate the joint planning actions into the Scaling Up Nutrition (SUN) initiatives in those countries that are already committed to the latter or that are already using joint planning as a starting point for SUN.

PART THREE. ADAPTING THE WORKSHOP METHODOLOGY

The workshop methodology can be adapted to:
• Other objectives
• Different levels of intervention
• Different time frames

To achieve other objectives

Designing a nutrition and food security surveillance system

The problem and/or solution tree methodology can be adapted to achieve other objectives, for example designing a nutrition and food security surveillance system. When used for this purpose, workshop participants will focus on understanding the nutrition situation in a given context and identify ways to effectively monitor. In this case, most of the attention will be given to the problem tree, and a solution tree may not be necessary.

The principal objectives of such a workshop will be to:
• draw up detailed problem trees for relevant population groups in a given area;
• identify the main components of the problem tree (the primary characteristics and the causes of food insecurity and malnutrition) that need to be monitored as part of the surveillance system;
• determine the locally relevant indicators for the selected components;
• choose which institutions (and which people inside these institutions) should be delegated to collect the information and define how it should be collected; and,
• based on the results of the problem tree, agree on a framework and on mechanisms for bringing together and analysing comprehensively the data provided by the surveillance system.

Training

The workshop methodology can also be used for various types of training, depending on local training needs. It could be used, for instance, to train participants in:

- the basic concepts of nutrition, food security and livelihoods;
- the complex and locally-specific causes of malnutrition;
- the appropriate planning methods for multi-sectoral integrated nutrition programmes; and,
- designing nutrition and food security surveillance systems.

During a training workshop, more time may be required for presentations and explanations of key concepts and methods than would be necessary in a simple planning workshop. The nature of the content of these presentations will depend on participants' existing knowledge and experience.

Note: Even during a training workshop, it is important to structure the workshop in such a way that the participants' own experiences and ideas can emerge, the idea being to avoid pre-empting participants' contributions and overlooking locally important issues. This can be done by allowing ample time for group discussion and brainstorming prior to making technical presentations.

West Africa
In May 2011, 50 participants from 10 West African countries, representing ministries of agriculture and health, civil society, research institutions and development partners, gathered in Dakar, Senegal, for a regional training on "Maximizing the nutritional impacts of food security interventions", organized by the Nutrition Working Group for West Africa.Having identified pastoralists, small farmers, fishermen, and urban poor as the main livelihoods groups exposed to food insecurity and malnutrition in the region, multi-sectoral and multi-country teams built problems and solution trees. These participatory exercises were complemented by presentations of tools and field case studies on situation assessment, programme design, implementation, monitoring and evaluation, and coordination. Participants very much appreciated the opportunity to break-down silos, have a constructive dialogue across sectors, and discuss practical solutions for improving food security and nutrition.

Fostering and strenghtening partnerships

This workshop metodology is also very effective for establishing a common language and understanding of a situation, and potentially reducing conflict between institutions. The solution tree clarifies where different agencies have a role to play and can help transform perceived competition into complementarity. When using this metodology to establish dialog and strenghten partnerships, it is important to ensure that key stakeholders are appropriately represented and that the venue is a neutral location.

Guatemala

In Guatemala, in May 1995, a two-day municipal training-cum-planning workshop on food security and nutrition was organized in Peten. It brought together representatives from governments and NGOs in a post-conflict climate. This was the first time these institutions had been brought together following the civil war in which they had associated with opposite sides. The workshop gave participants an opportunity to identify complementarities and potential partnerships and helped encourage dialogue between the government and NGOs, and between nationals and internationals.

To different levels of intervention

Part Two of these guidelines provided an example of how the methodology can be used at the provincial or district level. It can also be adapted for use at the regional and national levels. In such cases, discussions on the nutrition situation may be more general than what is possible at a more localized level because larger geographical areas encompass a much broader range of population groups and socio-economic and agro-ecological contexts. It is nevertheless still possible to identify major livelihood groups that are vulnerable to food insecurity and malnutrition, for example pastoralists, the urban poor, landless households in rural areas and so on. It is important to select livelihood groups that most participants are familiar with, so that a thorough analysis of problems and potential solutions can be made.

The methodology can also be adapted for use at the community level, as a participatory planning tool, for example, as a follow-up to the provincial or district-level planning workshop. However, in areas where illiteracy rates are high, the methodology should be adapted, using drawings and pictures to illustrate the causes of malnutrition, to allow illiterate members to participate fully. The exercise should be led by a facilitator with solid experience of participatory approaches at the community level.

To different time frames

Tips to save time

It is relatively simple to expand the time allocated to running the workshop, but more difficult to adapt the workshop to shorter time periods. However, possible short-cuts to reduce the time required do exist:

- It is feasible to cut down on the number and length of presentations. For example, to save time it can be decided not to present the results of food-security and nutrition assessments and not to ask implementing agencies to describe their existing interventions.

- In the case of planning workshops, the more detailed action planning that follows the solution tree exercise, as described in Part Two, can be conducted in the context of a plenary discussion during which major common action points can be identified. More detailed planning meetings can eventually be organized later on, but it is advisable not to let too much time elapse to avoid losing the momentum generated by the workshop.

- With a relatively experienced group of participants (i.e. professionals who are already familiar with the concepts of nutrition, food security and livelihoods), the problem tree and solution trees can be built in one day: a morning session for the problem tree, and an afternoon session for the solution tree.

Afghanistan

The express methodology was used in 2008 to facilitate the design of a Joint United Nations programme on Children, Food Security and Nutrition (funded through the Spanish MDG Trust Fund) involving the Ministry of Public Health, the Ministry of Agriculture, FAO, UNICEF, WHO, WFP and UNIDO. It allowed the identification of joint actions to be implemented in an integrated manner at the national level and at the community level, in half a day.

The "express" problem and/or solution tree

When the methodology is used for very specific joint planning purposes, it is possible to reduce the exercise to only a few hours. This "express" version can be useful when several agencies are working on the design of a joint programme and when programme planners are too busy to attend a two-day workshop, or even a one-day working session.

Running an "express workshop" is not an ideal solution, but it is better than not doing a problem-solution tree exercise at all. The fact is that this methodology makes it possible to build consensus among stakeholders and to ensure that a programme be designed on the basis of actual needs, rather than determined by organisational mandates and agendas.

This kind of adaptation requires the leadership of an experienced facilitator with strong synthesis skills and is most easily done when only one set of problem and solution trees is to be worked on. In such cases, it is possible to focus on only one livelihood group or on a "generic" tree presenting the general causes of malnutrition in a given population.

The following time-saving methods can be used:
- A few days before the workshop, the facilitator asks participants to send him or her a list of all the major causes of malnutrition they can think of.
- Before the workshop, the facilitator writes the causes on coloured cards, eliminates any duplicates, and groups them thematically.
- On the day of the workshop, the facilitator puts the cards up on a board, again grouped thematically, and facilitates the building of problem tree with participants in a plenary session.
- To build the solution tree, the participants break up into smaller groups, each group dealing with one main branch of the tree, for example that on health-related causes, that on food insecurity causes, and so on. Each group prepares its solution branches, taking into account potential linkages to other sectors.
- The participants then meet in another plenary session and compile their branches into one single solution tree.
- Participants then agree which of the interventions presented in the solution tree should receive priority. They fill in any gaps in terms of the interventions that should be depicted in the tree, and agree on who will do what.
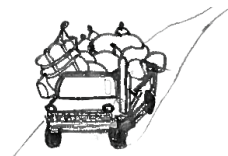
ANNEXES

Annexe 1: Key Recommendations for Improving Nutrition through Agriculture

Agricultural programmes and investments can strengthen impact on nutrition if they:

1. **Incorporate explicit nutrition objectives and indicators into their design, and track and mitigate potential harms**, while seeking synergies with economic, social and environmental objectives**.**
2. **Assess the context at the local level, to design appropriate activities to address the types and causes of malnutrition**, including chronic or acute undernutrition, vitamin and mineral deficiencies, and obesity and chronic disease.
3. **Target the vulnerable and improve equity** through participation, access to resources, and decent employment. Vulnerable groups include smallholders, women, youth, the landless, urban dwellers, the unemployed.
4. **Collaborate and coordinate with other sectors** (health, environment, social protection, education, etc.) and programmes, through joint strategies with common goals.
5. **Maintain or improve the natural resource base** (water, soil, air, climate, biodiversity), critical to the livelihoods and resilience of vulnerable farmers and to sustainable food and nutrition security for all.
6. **Empower women** by ensuring access to productive resources, income opportunities, extension services and information, credit, labor and time-saving technologies, and supporting their participation in decision-making.
7. **Facilitate production diversification, and increase production of nutrient-dense crops and small-scale livestock.**
8. **Improve processing, storage and preservation** to retain nutritional value, shelf-life, and food safety, to reduce seasonality of food insecurity and post-harvest losses, and to make healthy foods convenient to prepare.
9. **Expand markets and market access for vulnerable groups, particularly for marketing nutritious foods** or products vulnerable groups have a comparative advantage in producing.
10. **Incorporate nutrition promotion and education** around food and sustainable food systems that builds on existing local knowledge, attitudes and practices.

These recommendations have been compiled through an extensive consultation process and are based on the Synthesis of Guiding Principles on Agriculture Programming for Nutrition (www.fao.org/docrep/017/aq194e/aq194e00.htm).

Annexe 2: Example of a workshop agenda

DAY 1

8:30-9:00	Introduction of participants; Introductory speech by a local authority; Presentation of workshop objectives and agenda by the lead facilitator.
9:00-10:15	Plenary discussion on the nutritional situation in the selected area; presentation of nutritional data; discussion of feeding practices.
10:15-10:30	Selection of the most vulnerable livelihoods groups; description of group work and division into smaller working groups.
10:30-11:00	Tea break
11:00-12:30	Group work: Identification of causes of malnutrition and preparation of problem trees.
12:30-1:30	Lunch break
1:30 - 2:30	Group work: Finalization of problem trees.
2:30 - 3:30	Plenary: Presentation of the problem trees prepared by each group.
3:30 - 4:30	Incorporation of feedback by each group into its problem tree and/or presentations on the nutrition and food security situation of specific livelihoods groups.

DAY 2

8:30-10:30	Group work: Preparation of solution trees
10:30-11:00	Tea break
11:00-12:00	Plenary: Presentation of solution trees by each group and related discussions.
12:00-12:30	Presentations by participants of the relevant activities already implemented by their organisations and of new ideas and discussions generated by the workshop exercise.
12:30-1:30	Lunch break
1:30-3:00	Group work (preferably organized by geographical area): Discussions on potential strategies and actions that can be implemented with regard to identified solutions.
3:00-4:00	Plenary: Sharing of each group's recommendations. Ideally, at the end of this meeting, agreement will have been reached on common goals and on the principal actions to be undertaken, including follow-up points and an apportionment of responsibilities.
4:00-4:30	Workshop conclusions: summary of action proposals and lessons learned.

Annexe 3: Definitions of key terms

Acute malnutrition (or wasting): Individuals who suffer from acute malnutrition lose weight as a result of drastic lack of food or of disease. The main symptom of this is wasting - a loss of weight compared to individuals of the same height. This is measured among children under five years of age with a 'weight-for-height' (W/H) index.

Chronic malnutrition (or stunting): Individuals who suffer from chronic malnutrition fail to grow to their full genetic potential, both mentally and physically. The main symptom of this is stunting - shortness in height compared to others of the same age group. It is measured with 'height-for-age' (H/A) index among children under five years of age.

Food security: Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life. (World Food Summit, 1996)

Micronutrient deficiencies: Micronutrients are essential vitamins and minerals that everyone needs - in minute quantities - for good health. These essential vitamins and minerals include vitamin A, iodine, iron, and folic acid. Without micronutrients, the human body does not grow and function properly. The consequences of not getting enough micronutrients can range from birth defects and mental impairment to child deaths due to a lowered immune system and a consequent susceptibility to diseases.

Livelihoods: A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base (Chambers and Conway, 1992).

Underweight: Underweight refers to children who have a low weight compared to others of the same age and is measured by a 'weight-for-age' (W/A) index. Underweight can either be a sign of stunting or wasting, or a combination of both.

Vulnerability: This refers to the full range of factors that place people at risk of becoming food-insecure. The degree of vulnerability of individuals, households or groups of people is determined by their exposure to risk factors and their ability to cope with or withstand stressful situations.

Vulnerability to food insecurity and malnutrition occur at the level of population groups and households as well as that of individuals:
• Households that are at risk of not meeting their minimum food needs: These are

socio-economically vulnerable and often include female-headed households, the poor, the landless or the homeless. The vulnerable may not necessarily be the poorest of the poor; in the case of complex political emergencies, the vulnerable often comprise groups that are marginalized or oppressed on the basis of ethnicity, religion and/or political affiliation.

- Individuals who are at high risk of a deteriorating nutritional status because they have special nutritional needs for physiological reasons (e.g. pregnancy, growth) and/or a low capability to satisfy their needs without help from others. These are the physiologically vulnerable. They include infants, growing children and adolescents, pregnant and lactating women, the malnourished, the elderly, orphans, the terminally ill, and the mentally and physically disabled.

**Food and Agriculture Organization
of the United Nations**

OUR PRIORITIES
The FAO Strategic Objectives

Achieving FAO's goals to end hunger and poverty is a challenging and complex task. Today, thanks to major changes in how we do business, FAO is a fitter, flatter and more flexible organization, whose activities are driven by five strategic objectives. The new and improved FAO has a real chance to win the battle against hunger, malnutrition and rural poverty.

HELP ELIMINATE HUNGER, FOOD INSECURITY AND MALNUTRITION
We contribute to the eradication of hunger by facilitating policies and political commitments to support food security and by making sure that up-to-date information about hunger and nutrition challenges and solutions is available and accessible.

MAKE AGRICULTURE, FORESTRY AND FISHERIES MORE PRODUCTIVE AND SUSTAINABLE
We promote evidence-based policies and practices to support highly productive agricultural sectors (crops, livestock, forestry and fisheries), while ensuring that the natural resource base does not suffer in the process.

REDUCE RURAL POVERTY
We help the rural poor gain access to the resources and services they need – including rural employment and social protection – to forge a path out of poverty.

ENABLE INCLUSIVE AND EFFICIENT AGRICULTURAL AND FOOD SYSTEMS
We help to build safe and efficient food systems that support smallholder agriculture and reduce poverty and hunger in rural areas.

INCREASE THE RESILIENCE OF LIVELIHOODS FROM DISASTERS
We help countries to prepare for natural and human-caused disasters by reducing their risk and enhancing the resilience of their food and agricultural systems.