EC-FAO Food Security Information for Action Programme

Distance Learning to Support Capacity Building and Training for National and Local Food Security Information Systems and Networks

NUTRITIONAL STATUS ASSESSMENT AND ANALYSIS

LESSON 2. ASSESSING NUTRITIONAL STATUS

NOTE

Please note that this PDF version does not have the interactive features offered through the courseware such as exercises with feedback, pop-ups, animations etc.

We recommend that you take the lesson using the interactive courseware environment, and use the PDF version for printing the lesson and to use as a reference after you have completed the course.

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Learning Objectives

At the end of this lesson you will be able to:

• identify strengths and weaknesses of the main sources of nutritional status information;
• understand how the analysis of underlying causes of malnutrition can integrate the results of the assessments.

Introduction

Identifying nutritional problems of a population in a clear and measurable way will help to...

Define needs, opportunities and constraints and prioritize solutions
Evaluate programme impact and improve efficiency
Influence decision making in strategic planning, policy formulation and resource allocation
Raise community awareness and participation to maximize long-term impact
In order to define the nutritional problem it is necessary to measure the nutritional status of the targeted population.

Nutritional status assessments enable you to determine whether the individual is well-nourished or undernourished by measuring anthropometric, biochemical or physiological characteristics.

This information, combined with the analysis of underlying causes, will provide the understanding needed to select the appropriate intervention.

This is illustrated by the Triple-A Cycle diagram on the left.

Nutritional status can be assessed through:

- **Clinical examination and biochemical testing**, used to diagnose deficiencies of micronutrients (e.g. iodine, vitamin A and iron).
- **Body (anthropometric) measurements**, used to measure growth in children and body weight changes in adults.

**Assessing Nutritional Status**

Nutritional status assessments of individuals make use of measurable criteria.

These criteria reflect physical, physiological and biochemical changes as a result of inadequate food intake (quality and quantity) and diseases.

Source: UNICEF, Triple-A Cycle
Anthropometry is the most frequently used method to assess nutritional status. This method is precise and accurate and uses standardized techniques. It is also suitable for large sample sizes such as representative population samples. Moreover, it does not require expensive equipment and skills can be learnt quickly though diligence is required.

Multiple Indicator Cluster Survey (MICS) and Demographic and Health Surveys (DHS) are two major sources of anthropometric information.

There are four main data collection methodologies that provide anthropometric information:

- Repeated Surveys
- Growth Monitoring
- Sentinel Site Surveillance
- School Census Data

Let's have a look at each one of them...

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**Multiple Indicator Cluster Survey (MICS)**

MICS are household surveys conducted by UNICEF to support countries in collecting relevant data on child survival and health, child nutrition, maternal health, water and sanitation, immunization, education, child protection and HIV/AIDS.

UNICEF developed the Multiple Indicator Cluster Survey (MICS) methodology in the mid-1990s, in response to the need for filling data gaps for indicators used to track progress toward the World Summit for Children goals. The MICS surveys were designed to generate data in a timely and affordable manner.

MICS surveys are a major source of data for MDG monitoring, as well as the assessment of progress toward other international goals.

**Demographic and Health Surveys (DHS)**

DHS surveys are nationally-representative household surveys with large sample sizes, usually between 5,000 and 30,000 households, funded by USAID with contributions from other donors.

DHS surveys provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition of women and children in developing countries.

The basic approach used in the DHS surveys is to collect and make available data that are comparable across countries.

The main objective of DHS surveys is to provide policy-makers and program managers with detailed information on fertility and family planning, childhood mortality, maternal and child health, nutritional status of children and mothers, and awareness of HIV/AIDS.
Repeated surveys are population-based surveys that use standard methodologies to collect quantitative and qualitative data.

They assess type, severity and extent of malnutrition, and often also its causes, among a representative sample of the population (children and/or adults). The purpose is to support policy makers and managers to design and prioritize geographical areas and types of interventions.

Repeated surveys include national surveys, which are periodically conducted at national level, and small-scale surveys, which are carried out at local level to gather nutrition information within the shortest time possible.

Anthropometry

In 1999, the international NGO Merlin was working in war ravaged Sierre Leone. Increasing concern amongst the international agencies over the deteriorating food security and nutritional status of the vulnerable populations in Daru Town led the WFP to request that Merlin and GOAL undertake an assessment of the nutritional status of children aged 6-59 months.

Daru town was an isolated UNIMIL controlled enclave surrounded by rebel forces. Road access and its markets had been intermittent and vehicles had been attacked by rebel forces so that the road was closed. Planning the assessment was complicated. It involved using WFP helicopters and picking up staff with required expertise from a number of agencies on route to the isolated town. Three locations were identified and the team were divided into four teams.

There were strict time constraints with time on the ground limited to a mere 3 hours including travel to and from the sites. However, a total of 590 children aged 6-59 months were screened using weight for height indicators. Two WFP staff simultaneously conducted a quick commodity price survey and assessed food availability in the market. They also visited the outskirts of the town to assess the degree of home garden production.
GROWTH MONITORING

Growth monitoring is the continuous monitoring of growth in children. At the individual level, the objective is to identify the slowing of growth or of growth faltering in order to correct it quickly through, for example, a health intervention, and at a group level to monitor the general nutritional status in order to mobilize local resources to support nutrition-related activities. The growth is usually measured as weight-for-age, once per month.

Growth monitoring can be conducted by health professionals at Maternal and Child Health clinics (clinic-based growth monitoring) or by trained members of the community in villages (community-based growth monitoring).

Anthropometry

From 1978, Catholic Relief Services (CRS) operated a feeding programme through the Mother and Child Health (MCH) infrastructure in conjunction with a nutritional surveillance system. About 7 percent of pre-school children in Ghana were enrolled in the CRS MCH growth monitoring programme in 1981. Children under 80 percent weight for age received a small supplementary food ration. All data collected through the National Screening system were sent to Accra and quarterly and annual reports prepared. These reports presented data graphically on regional and national rates of malnutrition and on regional attendance fluctuations.

• By September 1981, the level of malnutrition (less than 80 percent weight for age) was higher than usual and the normal post-harvest improvement had yet to take place by the end of the year.

• Over 1982, the system showed a more rapidly deteriorating situation with aggregate levels of malnutrition increasing from 38 to 45 percent by June and recovering by the end of the year to 41 percent so that the effect of the hungry season was far more pronounced than in previous years.

• In 1983, there was a continued decline in nutritional status when, between January and June, malnutrition levels rose to 51 percent, improving somewhat by the end of the year (46 percent).

In June 1983, the government of Ghana declared a state of national emergency and requested international food aid assistance.

The CRS nutritional surveillance system had, therefore, been able to provide clear warning of the impending crisis 18 months before the Government’s emergency declaration. Furthermore, the National Screening data could be disaggregated on a regional basis to help determine where the situation was deteriorating most rapidly.
The National Nutrition Programme, implemented in the late 1990s in Bangladesh, includes a monitoring system designed to support decision making in the programme, which uses data 'on the way up,' i.e. at the village, union and upazila (rural administrative subdivision of a district) levels before data is aggregated at the central level.

Monthly weight-for-age of children up to 24 months and pregnancy weight gain data are collected by Community Nutrition Promoters, women from the community who are trained by contracted NGOs and supervised by community nutrition officers. The data are intended to trigger an appropriate response at the village, union and or upazila levels. For example, communities with less than 80 percent growth monitoring coverage or less than 90 percent of eligible children and women receiving food supplements, or more than 5 percent of children with severe malnutrition (<60% weight for age) are identified for special follow-up by the relevant community or government worker and appropriate action taken.

The nutrition monitoring data are also used to assess the effectiveness of the programme inputs. For example, it has been possible to assess the impact of a daily food supplement (equal to 600 kilocalories) targeted at low Body Mass Index (BMI) pregnant women and to establish that these women have had better pregnancy outcomes (pregnancy weight gain and birth weight) than the higher BMI and economically more advantaged pregnant women.

Data reliability has been an area of concern in the programme and is mirrored in many other programmes of this kind. The problems range from mechanical failure of the weighing scales, reading and recording failure and, in some instances, intentional misrepresentation of the data by community workers, who wish to make their performance in relation to nutrition outcomes look good. Having recognized these problems, the programme is implementing quality checks that include ‘day after’ re-weighing, improving the quality and reliability of the weighing scales and increasing the level of supporting supervision for the Promoters.

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**Case study – Community-based growth monitoring in Bangladesh**

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**Anthropometry**

**CASE STUDY – COMMUNITY-BASED GROWTH MONITORING IN BANGLADESH**

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Nutritional assessment is occasionally undertaken in schools, where first-grade children are measured through censuses that are carried out every two to three years.

The objective is to identify high-risk children with poor health, malnutrition and low socio-economic status.

Results can be used to target school feeding programmes and to support policy making in food-based strategies.

Click on the icon to read and print a table describing the features of school census data, their purpose, objectives, strengths and weaknesses.

Before continuing, let's summarize some of the features of the various data collection methodologies.

Monitor continuously the growth of children.
Can represent the entire population.
Can act as an early warning component to respond to both natural disasters and economic stress.
Help to prioritize geographic areas.
Help to target school feeding programmes.
Help to mobilize local resources to support nutrition-related activities.
Used in highly vulnerable areas.
Carried out every two to three years to identify high-risk children.

Please select the options of your choice.
Biochemical testing and clinical examination can contribute to diagnosing micronutrient deficiencies.

Iodine, vitamin A deficiency and iron deficiency anaemia are the most common deficiencies.

Other micronutrient deficiencies recur during emergencies - for example, scurvy, beri-beri (vitamin B1 deficiency) and pellagra (vitamin B3 deficiency).

These conditions are usually initially identified clinically, while biochemical means tend to be used mainly to confirm a suspected outbreak.

### Food Intake Surveys

The sources described above measure nutritional outcome, as a result of inadequate intake or poor absorption and utilization of ingested food.

Information on food intake may help to better understand the causes of malnutrition and can also be used as a proxy for nutritional outcome. See the Annex 2.1 for a mini-lesson.

### Selecting Nutrition Information Sources

Many factors need to be considered when determining which type of information source to use.

First, primary objectives should largely determine the source.

For example...

<table>
<thead>
<tr>
<th>If the primary objective is...</th>
<th>Then the appropriate source may be...</th>
</tr>
</thead>
<tbody>
<tr>
<td>to guide decisions on resource targeting at national level</td>
<td>A</td>
</tr>
<tr>
<td>to support households in prevention and treatment of malnutrition</td>
<td>growth monitoring</td>
</tr>
</tbody>
</table>

1. growth monitoring  repeated surveys

Click on each option and drag it to the correct box. Then, click on Check Answer.
Matching costs with resource availability is key to deciding which information source to use. National surveys are very expensive and time-consuming compared to community-based systems, so that donor funding often has to be found. For this reason, it is important to look at existing data before undertaking any survey. A view on the need to sustain a system over a period of time is also critical. Sentinel site assessment is particularly good for contexts where there will be a need to have a longer-term system in place. Clinic- and community-based growth monitoring programmes frequently lack sufficient resources for data collection and analysis.

Selecting Nutrition Information Sources

Other key factors to consider are the following:

- **Response capacity** at different levels (household, community, district, national and international).

  Response capacity relates to human, physical, financial and social resources, which enables food security and nutrition interventions at various levels ranging from the community to central government level.

  For example, if there is little response capacity at community level, then there may be little point in implementing community-based growth monitoring or sentinel site surveillance.

  Response to information is very dependent on credibility of information, which can be enhanced by involving decision makers in the methodology and analysis and also by establishing an inter-agency dialogue for both developing the method and undertaking the analysis.

- **Environmental factors**, such as security, geographical terrain and infrastructure.

  Security, geographical terrain and infrastructure may be key determinants in selecting a method.

  Insecurity may prevent representative sampling so that surveys are not feasible while poor infrastructure and difficult terrain may constrain regular information collection and flows in community-based systems of data collection.
Seasonality of malnutrition in most developing countries.

Most developing countries have seasonal patterns of malnutrition. If repeated surveys are to be implemented, it is essential that they be conducted at the same time of the year.

Where this is not possible, i.e. in emergencies where the cycle of the intervention will be no more than a year (until the next harvest), there must be awareness of seasonal patterns so that any decline or improvement in the situation can be understood in terms of seasonality.

Growth monitoring data are particularly good at demonstrating seasonal patterns.

Emergency versus non-emergency contexts.

In emergencies, the requirement is to obtain data rapidly and for the data to be credible and to represent the entire affected population. Nutritional cluster surveys are therefore often the preferred method.

However, in some situations it is impossible to spend sufficient time on the ground. In these situations, compromise sampling may need to be executed, e.g. gathering all children at a site to be measured. This approach does not give a statistically rigorous prevalence of malnutrition but it will give a sense of whether there are enough children to justify establishing therapeutic feeding centres or a community-based nutrition programme. Sentinel site monitoring is particularly good for early warning purposes and can pick up trends quickly. Triggers can then be invoked for conducting nutritional surveys that determine more accurate levels of malnutrition.

Organizational mandate and implementation capacity.

The mandate and implementation capacity of an agency will have an influence on the most appropriate form of nutrition assessment.

For example, if an agency specializes in selective feeding programmes, e.g. therapeutic and supplementary feeding, then it is essential to know the prevalence of malnutrition as this will indicate whether this type of programme is justified.

If, on the other hand, the mandate and implementation capacity of the agency dictate more of a community-based approach to programming, then community-based sentinel site or growth monitoring may be more appropriate.
Nutritional status data alone are of limited use if effective responses to reduce malnutrition are to be identified. It is important to ask why dietary intake is inadequate, or why certain diseases are common.

Additional information about **access to food, health and care practices** is needed to interpret malnutrition and understand what are the underlying causes.

For example, looking into care issues may require quantitative data such as rates of exclusive breastfeeding in infants, as well as qualitative information, such as support networks for mothers.

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**Using a conceptual framework**

The conceptual framework developed by FAO's Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS) corresponds closely to the UNICEF framework.

In any nutrition problem analysis or assessment, it is necessary to understand the relative roles of **food, health and care** factors in the causes of malnutrition.

The framework shows that causes of malnutrition are multi-sectoral, embracing food health and caring practices.

The causes can be classified as immediate (food consumption, food utilization and health status), underlying (care practices and sanitation, availability, access and stability) and basic (socio-economic environment), whereby **factors at one level influence other levels**. It is also important to realize that these three causes are not completely independent, but interact in important ways.
Participatory appraisal of nutrition will allow an analysis to be carried out from a livelihoods perspective, which means to understand the specific causes of malnutrition in a particular livelihood.

Participatory appraisals serve to:
- understand the food and nutrition situation and raise awareness in the community;
- promote the participation of different community groups (e.g. women, poor people, young people);
- identify the problems, constraints and opportunities to adequate nutrition and the population groups most affected;
- prioritize food and nutrition problems;
- jointly plan food and nutrition activities to remedy the problems; and
- contribute to community empowerment.

Analysing Underlying Causes

In your opinion, which of the following aspects can be better understood by using a participatory appraisal?

- The level of micronutrient deficiencies within the community.
- The support provided to elderly and ill people by the community.
- The ways households cope with nutrition problems.
- The severity and extent of malnutrition within the community.

Please select the answers (two or more) of your choice.
C) The ways households cope with seasonal or unexpected food and nutrition problems and the long-term impact of these coping mechanisms on a household's food production and consumption. Marginalized households and individuals need special attention. Within a community, the poorest households are likely to have the most serious nutritional problems and the fewest resources.

Analysing Underlying Causes

In carrying out the participatory appraisal, the following points deserve particular attention:

A) Traditional food habits and production systems (and also health and care practices) and how they change over time, why they change and whether these changes have resulted in improved nutrition.

B) Desired food patterns, or what people prefer to eat and why.

C) The ways households cope with seasonal or unexpected food and nutrition problems and the long-term impact of these coping mechanisms on a household's food production and consumption. Marginalized households and individuals need special attention. Within a community, the poorest households are likely to have the most serious nutritional problems and the fewest resources.

Analysing Underlying Causes

The steps in the participatory appraisal of community food and nutrition are:

1. Analyse the food and nutrition situation.
2. Identify nutrition-related problems and major constraints to adequate nutrition.
3. Identify vulnerable households in relation to each problem and determine those most affected.
4. Prioritize food and nutrition problems.
5. Summarize and agree on the outcomes of the appraisal.

Several tools and techniques are used such as: resource maps, wealth ranking, institutional Venn diagrams, seasonal calendars, time charts/daily activities, focus group discussions and key informant interviews.

FIELD METHODS TOOL BOX based on FAO methodological guide

This PDF document provides, for each one of the listed participatory techniques: description, objectives, use, key questions, facilitation guidelines, time and materials needed.
An impact diagram or a **problem tree** can be used as a visual summary of the information gathered, to point out the origins of problems and show the causes of malnutrition and their interconnections.

Problem tree analysis helps identify population/livelihood groups and/or households at risk for each of the nutrition problems identified. Problem trees are commonly converted into **solution trees** as a basis for objective oriented planning.

Qualitative findings are used to help triangulate, explain and make associations with quantitative findings (levels of malnutrition).

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**Analysing Underlying Causes**

![Problem Tree Diagram]

"Problem Tree" identifying causes of malnutrition
(in selected communities of Kakamega District, Kenya)
Nutritional Status Assessment and Analysis - Lesson 2. Assessing Nutritional Status

The final challenge in analysing malnutrition is to combine quantitative and qualitative findings. Participatory appraisal findings are largely qualitative and descriptive. They can be structured into village profiles and also aggregated in district or regional profiles. A further interpretation is to find out what has helped (strengths and opportunities) and what has hindered (weaknesses and threats) people in achieving good nutrition (SWOT analysis). This can provide a good basis for discussions and subsequent planning of interventions.

Example of village profile (see the SWOT analysis on the last page)
Example of district profile

From Analysis to Action

Let's now consider the following case study.

Case Study - Darfur in 2000

A nutritional survey was conducted in Darfur at the same time as a household economy assessment (HEA), which determines the food gap of households.

The HEA predicted that there would be a food deficit at some point in the future, based on poor cereal production, high grain prices and low groundnut prices.

The nutritional survey showed a current high rate of global acute malnutrition (GAM) as well as signs of vitamin A deficiency. The nutrition survey also indicated that there had recently been a measles epidemic.

If the malnutrition rates had been interpreted in the absence of morbidity data, the high rate of GAM may have been attributed mainly to food deficit, as there had been a harvest shortfall; the role of the measles epidemic as a major contributing factor may have been overlooked.
Two examples of analyses that integrate multi-sectoral information into assessment are:

### Nutrition Country Profiles - NCPs

As the Darfur Case Study has shown, it is critical to carry out an **integrated analysis** that combines nutrition data with other kinds of information. This is needed in emergency contexts as well as in more stable situations, where there is greater need to analyse basic causes operating at societal level in order to better design interventions.

Relying simply on measurements of nutritional status in a population can be misleading and, at worst, may lead to inappropriate responses.

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**From Analysis to Action**

**Example – Nutrition Information in Crisis Situations**

The NICS classification defines five levels of nutritional risk relating to risk and/or prevalence of malnutrition.

The prevalence/risk is indirectly affected by both the underlying causes of malnutrition, relating to food, health and care, and the constraints limiting humanitarian response. The categories are summations of the causes of malnutrition and the humanitarian response.

- Populations in category I are critical and either have a very high risk of malnutrition or surveys have reported a high prevalence of malnutrition and/or elevated mortality rates.
- Populations in category II are currently at high risk of becoming malnourished or have a high prevalence of malnutrition.
- Populations in category III are at moderate risk of malnutrition or have a moderately high prevalence of malnutrition; there may be pockets of high malnutrition in a given area.
- Populations in category IV are not at an elevated nutritional risk.
- The risk of malnutrition among populations in category V is not known.
If there are measured or assessed problems in terms of disease patterns/outbreaks, poor water and sanitation conditions, or inappropriate caring practices, then this would argue for multi-sectoral intervention (e.g. school gardening).

Experiences show us that, where programmes have not been multi-sectoral, there has been little or no impact on population-level nutritional status.

Conversely, where interventions have been multi-sectoral, improvements in nutritional status have occurred.

Let’s consider the following example.

**Example: Nutritional profile of an Ethiopian highland community**

In the rural highlands of Ethiopia, subsistence farmers have less than a half-hectare of land on which to grow crops. This has led to a situation where in a good year, teff production (the local staple) will last an average family for five months.
A nutritional assessment by UNHCR also collected information on water quality, levels of diarrhoea and use of breast milk substitutes.

The findings were that levels of diarrhoea were of 60 percent, that breast milk substitutes were being over-used and the products were being used with contaminated water supplies. These findings confirmed that the nutritional problems were mainly related to infant feeding practices, hygiene and sanitation and that food rations were not the issue.
Levels of malnutrition in Darfur during the recent humanitarian crisis have been extremely high. Some agencies were mindful of the fact that a far broader multi-sectoral response was needed to make significant and sustainable improvements in nutrition.

An assessment was carried out to investigate the effects of the current conflict and humanitarian crisis on the livelihoods of selected communities in Darfur, in order to refine strategic humanitarian interventions. The study focused on labour migration, livestock production and trade, and on communities’ links with central and eastern Sudan and with Libya.

Key findings of the assessment were as follows:

- The most fundamental problem affecting livelihoods was insecurity, which was widespread as a result of continued ceasefire violations on the part of both the Government of Sudan and rebel groups.
- The conflict has caused a dramatic decline in the sending of remittances, a traditionally stable source of income for Darfurian families.
- In economic terms, livestock had been the primary target of the current conflict. The non-Arab population of Darfur has lost between 50 and 90 percent of its livestock to the government’s armed forces. Increasing hostility between Arabs and non-Arabs, and control by the Sudan Liberation Movement of some critical areas along the traditional migratory routes, had resulted in the restriction of access to the wet-season grazing reserves in the north for the camel-herding Arabs. Similarly, cattle belonging to the Baggara cattle-herding groups have been confined to the railway line close to Nyala town and to the Nyala-Kaz Zalingi road in the west. The disruption of livestock trade both within Darfur and beyond its borders has signalled a downward spiral of the region’s economy. Important secondary markets such as Mellit have been closed.

The main recommendations from the study were that major structural changes needed to be addressed at the international, national and state levels. These changes included the process of land restitution and compensation; livestock restitution, reconciliation and compensation; and the opening up of transport routes to provide safe passage for people, livestock and goods. Ideally, the wider processes of reconciliation should be linked with livelihood support.

Guidelines and Tools

From this page you can download and print the documents that have been mentioned in the lesson and may be useful as reference.

Click on the icons to open the relevant documents:

**TABLE COMPARING ASSESSMENT METHODS**
This PDF document provides, for each one of the described assessment methods: description, purpose, objectives, strengths and weaknesses.

**FIELD METHODS TOOL BOX**
This PDF document provides, for each one of the listed participatory techniques: description, objectives, use, key questions, facilitation guidelines, time and materials needed.
Summary

Nutritional status assessments enables to determine whether a population group is well-nourished or undernourished by using anthropometric measurements, biochemical testing or by identifying physiological signs.

The main data collection methodologies that provide anthropometric information are: population-based surveys, growth monitoring, and sentinel site and school census data.

Additional information on factors such as food security, livelihoods, and health and care practices is usually necessary to interpret nutritional status data and determine the likely causes of malnutrition.

Information on nutritional status, combined with the analysis of underlying causes, will provide the understanding needed to select the appropriate intervention.

Experience shows that multi-sectoral interventions have a better chance of improving the nutritional status of the population.

If you want to know more...

Online resources
If you want to know more...

Online resources (continued)

World Health Organization - Nutrition in Emergencies Publications

Food Security Analysis Unit for Somalia.


http://www.ifpri.org/training/material_food.htm

http://www.who.int/hac/events/Trackingworkshop_December05_report.pdf


http://www.odihpn.org/report.asp?id=2849

If you want to know more...


Additional reading


NutritionWorks.


Food consumption surveys

Food intake or consumption surveys assess, as accurately as possible, the types and amounts of food eaten. This can be represented in terms of daily energy and nutrient intake per person. The approach may involve weighing amounts of food eaten or using dietary recall.

**ADVANTAGES**: The value of food intake surveys is that they can provide invaluable information on quantities, diet quality and on whether energy and nutrient intake are being met. Generally, this type of assessment is undertaken in stable contexts where more information is needed about dietary causes of malnutrition.

**DIFFICULTIES**: Weighed intake assessments are very labour-intensive, time consuming and costly. Dietary recall assessments are less invasive but more dependent on memory. The analysis of food intake surveys requires a high level of skills and the use of specific software, as well as availability of a food composition table.

**DIETARY DIVERSITY SCORES**

Individual dietary diversity (DD) scores is a proxy of nutritional quality of the diet. The DD scores consists of a simple count of the number of food groups consumed by an individual or a household over a given period of time. The assumption is that the higher the score, the better the quality of the diet. Assessing DD is useful to evaluate the impact of a wide range of programmes on dietary quality. Some examples are livelihoods and crop diversification, nutrition education, school and homestead gardens. These assessments may be carried out in stable situations where there is a known problem of lack of dietary diversity and where efforts to improve agricultural diversification in order to improve diet have been ongoing for many years.

The DD assessment can also be used in emergency contexts, where shock can adversely impact the quality of the diet.
Food basket monitoring (FBM)

Food basket monitoring is usually carried out at food distribution sites or at household level in camp situations, e.g. among refugees, in order to ensure that food distribution systems are operating effectively and to help identify any risk of nutrition problems, especially micronutrient deficiency diseases.

Where camp populations are dependent on long-term food aid, FBM is critical, especially where the ration diversity is limited and where there is an absence of micronutrient rich foods in the ration, e.g. fortified Corn Soy Blend. Computer programmes to calculate micronutrient content of food rations are available and can be applied to FBM data to help determine whether there is a risk of micronutrient disease and therefore whether to alert authorities to the possibility of outbreaks.

Annex 2.2
Mini lesson - Adopting a Livelihoods-oriented Approach

Why a Livelihoods-based Approach

Nutrition is both an outcome and a determinant of people's livelihoods. Livelihood refers to people, their capabilities, their assets and activities required for a means of living (including ways to obtain food).

Adopting a livelihoods-based approach allows a focus on the way people live, why they live that way, and why and how this way of life changes.

A livelihood group refers to a group of people with similar income and food sources and who share similar risks and vulnerabilities to food insecurity and malnutrition.

Disaggregating nutrition information by livelihood groups is seen as increasingly useful in the nutrition appraisal and planning process. This is because livelihood approaches have the potential to generate more sensitive and appropriate interventions than is possible with generic policies and programmes that, when based on simple age and sex disaggregated information, are not tailored to local circumstances.

Disaggregating nutrition information by livelihood group is essential to:
• understand the severity, causality and impact of malnutrition; and
• identify likely entry points for interventions – both short and long term – and their likely impact on people's lives.
Advantages of Adopting a Livelihoods-based Approach

A livelihoods-based approach can help to:

- gain insight into the factors contributing to poverty by identifying groups of poor people and analysing their livelihoods;
- ensure that important livelihood components and constraints are not overlooked;
- emphasize issues of vulnerability and the dimensions of sustainability that national macroeconomic plans often fail to integrate adequately;
- design effective participatory consultation processes;
- highlight where and how government may intervene; and
- improve the linkages between micro-level realities and macro-level policies by analysing the impact of macroeconomic policies on the livelihoods of the poor, and by identifying those that discriminate against the poor.

The advantages of adopting a livelihoods-based approach directly stem from the livelihoods fundamental principles on which all livelihoods programming are based, namely: it is people-centred, multi-level, dynamic, and ultimately aims to achieve sustainable livelihoods.

Challenges in Adopting a Livelihoods-oriented Approach

The feasibility of using a sustainable livelihoods framework in conjunction with nutritional assessment will be determined by a number of factors:

Collecting livelihood information or adopting a livelihoods-oriented approach will require spending time with respondents to allow in-depth questioning. This would favour sentinel site surveillance (centrally administered) rather than repeated surveys or growth monitoring programmes.

Increasing information demands will increase cost.

Individuals who are able to collect nutritional information, e.g. nurses/health staff at health centres or community-based staff in nutrition surveys, may not be skilled in collecting more analytical information using participatory methods. At the very least substantial training will be required.

Carrying out the nutritional assessment on samples that represent specific livelihood or food economy groups allows to integrate the two types of information into an analytical framework.