



# Participatory Community Nutrition Education

Training Manual for Community Health Workers

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This manual has been developed based on experiences from research in Kenya. In case you wish to apply it in other countries, please note that “county” refers to an administrative unit. In other countries, these units may be called districts or similar. This training is aimed at volunteers operating at village level. Ideally, they will have been recruited by the Ministry of Health or Ministry of Agriculture. They will have basic knowledge on nutrition-related health challenges at the community level. In Kenya, these volunteers are called community health volunteers (CHVs) and report to community health extension workers (CHEWs) at the county level. If these groups do not exist in your target area and you need to identify untrained volunteers in the villages yourself, you may consider allocating more time for each session and including repetition sessions to provide time and space for practicing and learning.

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# Participatory Community Nutrition Education

Training Manual for Community  
Health Workers

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# Table of Contents

## INTRODUCTION TO THE MANUAL

Background	6
Target group and training team	6
Training methodology	6
Training structure	7

## SESSION 1: INTRODUCTION, EXPECTATIONS, NORMS, AND OBJECTIVES

Introduction	8
<b>Activity 1:</b> Opening and welcome ( <i>5 minutes</i> )	9
<b>Activity 2:</b> Participant introduction, existing knowledge about good nutrition, and participant expectations ( <i>30 minutes</i> )	9
<b>Activity 3:</b> Brief introduction to the project and purpose of the training ( <i>15 minutes</i> )	9
<b>Activity 4:</b> Housekeeping and course norms ( <i>10 minutes</i> )	10
<b>Activity 5:</b> Nutrition knowledge assessment exam ( <i>10 minutes</i> )	10

## SESSION 2: NUTRITION THROUGHOUT THE LIFE-CYCLE

Introduction	11
<b>Activity 1:</b> Plenary discussion – Nutritionally vulnerable family members ( <i>20 minutes</i> )	12
<b>Activity 2:</b> Plenary discussion – The intergenerational cycle of malnutrition ( <i>40 minutes</i> )	13
<b>Activity 3:</b> Group work – Breaking the malnutrition cycle through maternal nutrition ( <i>30 minutes</i> )	14
<b>Activity 4:</b> Group work – Breaking the cycle of malnutrition through early childhood nutrition (0–59 months) ( <i>30 minutes</i> )	15

## SESSION 3: DIETARY DIVERSITY

Introduction	16
<b>Activity 1:</b> Brainstorming on what food is and its role in the body ( <i>20 minutes</i> )	17
<b>Activity 2:</b> Explaining the concept of a diverse diet ( <i>60 minutes</i> )	17
<b>Activity 3:</b> Dissemination of baseline findings on dietary diversity for children and women ( <i>30 minutes</i> )	19
<b>Activity 4:</b> Effects of poor dietary diversity on health ( <i>30 minutes</i> )	19
<b>Activity 5:</b> Relating good nutrition to good health ( <i>20 minutes</i> )	20
<b>Activity 6:</b> Participants compose and practice a song on dietary diversity and good health	21

## SESSION 4: FOOD SOURCES – DIVERSIFYING DIETS THROUGH THE FARM, WILD SOURCES, AND LOCAL MARKETS

Introduction	22
<b>Activity 1:</b> Practice the song on dietary diversity, complementary feeding, and good sanitation practices composed in Session 3 ( <i>10 minutes</i> )	23
<b>Activity 2:</b> Brainstorm locally available wild edible plants ( <i>15 minutes</i> )	23
<b>Activity 3:</b> Group work – Local food calendar of domesticated and wild foods ( <i>90 minutes</i> )	24
<b>Activity 4:</b> Understanding the nutritional value of selected wild edible plants ( <i>15 minutes</i> )	25
<b>Activity 5:</b> End the day with the song on dietary diversity, complementary feeding, and good sanitation practices ( <i>10 minutes</i> )	25

**SESSION 5: PARTICIPATORY COOKING SESSION FOCUSED ON LOCAL RECIPES 26**

Introduction	26
<b>Activity 1:</b> Start the day with the song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)	27
<b>Activity 2:</b> Food preparation (180 minutes)	27
<b>Activity 3:</b> Sensory tasting and feeding trials (60 minutes)	28
<b>Activity 4:</b> Sharing experiences of food preparation and tasting (60 minutes)	28
<b>Activity 5:</b> Sharing experiences of the overall participatory cooking session (45 minutes)	29
<b>Activity 6:</b> End the day with the song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)	29

**SESSION 6: LINKING AGRICULTURE TO NUTRITION 30**

Introduction	30
<b>Activity 1:</b> Start the day with the song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)	31
<b>Activity 2:</b> Group work – Introduction to home gardening (30 minutes)	31
<b>Activity 3:</b> Lecture – Selecting crops for kitchen gardening (45 minutes)	32
<b>Activity 4:</b> Brainstorming – Selecting a suitable space and type of home garden (45 minutes)	32
<b>Activity 5:</b> Video of different garden types (45 minutes)	33
<b>Activity 6:</b> Understanding the nutritional value of selected wild edible plants (15 minutes)	33
<b>Activity 7:</b> End the day with the song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)	33

**SESSION 7: INTEGRATING NUTRITION PROMOTION IN COMMUNITY HEALTH VOLUNTEERS' WORK 34**

Introduction	34
<b>Activity 1:</b> Song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)	35
<b>Activity 2:</b> Recapitulation of the first three days of training (30 minutes)	35
<b>Activity 3:</b> Post-training test (10 minutes)	35
<b>Activity 4:</b> Role play – Nutrition counselling and education by community health volunteers (30 minutes)	35
<b>Activity 5:</b> Video on nutrition education and counselling for additional practical lessons (10 minutes)	36
<b>Activity 6:</b> Group work – Exploring the role of community health volunteers (45 minutes)	36
<b>Activity 7:</b> Reporting tools for household visits by CHVs and CHEWs (90 minutes)	37
<b>Activity 8:</b> Graduation ceremony (45 minutes)	37
<b>Activity 9:</b> Finish the workshop with the song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)	37

**ANNEXES 38**

<b>Annex 1:</b> Nutrition knowledge assessment pre- and post-test ( <i>translate into local language if possible</i> )	38
<b>Annex 2:</b> Materials which may be used to help discussion of various forms of malnutrition	40
<b>Annex 3:</b> Chart visualizing the ten food groups	42
<b>Annex 4:</b> Pictures to show parallels between plant and human health ( <i>copyright within Alliance</i> )	44
<b>Annex 5:</b> Video resources for the training	46
<b>Annex 6:</b> Reporting tools	47
<b>Annex 7:</b> Sample of participant certificate	49
<b>Annex 8:</b> Various forms of modern farming technologies	50
<b>Annex 9:</b> Recipes and exemplary outcomes of participatory cooking sessions	52
<b>Annex 10:</b> Example outcome of tasting and feedback session	55

# INTRODUCTION TO THE MANUAL

## Background

This manual has been developed based on participatory workshops and subsequent agri-nutrition training courses in Vihiga County, Western Kenya by the Alliance of Bioversity International and CIAT. This manual was further evaluated in Turkana and Busia Counties in Kenya, with the intention to develop agricultural interventions to improve nutrition.

The learning objectives for the training are focused on: (1) basic principles of nutrition; (2) a life-cycle approach to nutrition; (3) home gardening; (4) use of underutilized crops to diversify diets; and (5) a practical cooking demonstration session.

By the end of the training, participants will be able to:

1. Identify various forms of malnutrition (underweight, wasting, stunting, overweight, and obesity)
2. Describe what makes a healthy diverse diet for women, children, and other family members
3. Appreciate the role of home food production in ensuring consumption of diverse diets
4. Appreciate the potential role of wild and underutilized plant species in increasing the diversity of diets to improve nutrition
5. Demonstrate practical skills in offering nutrition education, counselling, and cooking demonstrations in the community
6. Understand their role in promoting good nutrition practices in their communities

## Target group and training team

This training is intended for community health workers from communities where nutrition-sensitive agricultural projects are being implemented. The aim is to empower participants to gain the skills necessary to provide nutrition education and counselling to the beneficiaries of agricultural interventions in their communities.

At least three facilitators should conduct the training. They should be agri-nutrition experts with community-based experience, and skills in counselling and social mobilization as well as in facilitating the training of community workers. Ideally, plan for no more than 30 participants in the training, and assign each facilitator a maximum of 10 participants. When the ratio exceeds this number, it is difficult to oversee skills development and ensure competency.

## Training methodology

The goal of the Participatory Community Nutrition Education Training Manual is to prepare participants to improve the nutrition and dietary diversity of their communities, using locally available and underutilized foods. The competency-based participatory training approach used in this Training Manual reflects key principles of behavior change communication, with a focus on promoting small achievable actions. This approach recognizes the widely acknowledged theory that adults learn best by reflecting on their own personal experiences.

**Note:** This manual has been developed based on experiences from research in Kenya. In case you wish to apply it in other countries, please note that “county” refers to an administrative unit. In other countries, these units may be called districts or similar. This training is aimed at volunteers operating at village level. Ideally, they will have been recruited by the Ministry of Health or Ministry of Agriculture. They will have basic knowledge on nutrition-related health challenges at the community level. In Kenya, these volunteers are called community health volunteers (CHVs) and report to community health extension workers (CHEWs) at the county level. If these groups do not exist in your target area and you need to identify untrained volunteers in the villages yourself, you may consider allocating more time for each session and including repetition sessions to provide time and space for practicing and learning.



## Training structure

The Training Manual includes seven sessions, covering four days:

Day (9am-4pm)	Morning Session	Afternoon Session
1	1. Introduction	2. Nutrition throughout the life-cycle
2	3. Dietary diversity	4. Food sources
3	5. Participatory cooking session	
4	6. Linking agriculture and nutrition	7. Role of community health volunteers (CHVs) in nutrition education & Graduation ceremony

**Note:** The tea and lunch breaks should aim to offer a diverse diet covering different food groups following the dietary recommendations presented in the training. Mashed fruits and enriched porridges may constitute part of the food provided, in order to practice and taste new recipes.

Details of each session are described in the following sections and include:



Learning objectives



List of materials needed (training aids and handouts)



Advance preparation (presented in the section for the actual session but should be completed prior to the session)



Time allotted (for the activities only; breaks appropriate to the local context, e.g., tea and lunch, should be added)



Suggested activities and methodologies, based on each learning objective, with instructions for the facilitator(s)



Key information with explanation of content

This manual is for facilitators to use as guidance when they prepare and execute the training; it is not intended to be given to participants.

SESSION 1:

# INTRODUCTION, EXPECTATIONS, NORMS, AND OBJECTIVES

## Introduction

The purpose of this session is to officially launch the training program. The session will introduce participants to the facilitators and to each other and give them a chance to share their expectations of the training and relate their expectations to the course objectives.



### Learning objectives

By the end of the session, the participants will be able to:

1. Recognize fellow participants, facilitators, and resource persons
2. Recognize the project and the purpose of the training
3. Compare course objectives with participants' expectations
4. Describe the purpose of the training
5. Discuss administrative and housekeeping arrangements



### Materials

1. Flipchart, markers, and sticky notepads
2. Notebooks and pens for participants
3. Name tag for each participant
4. Flipchart page listing training objectives
5. Flipchart page titled "Expectations"
6. Flipchart page titled "Ground rules" or "Group norms"
7. Copies of the training program and timetable



### Advance preparation

1. Review the key information for each activity in this session
2. Write training objectives on flipchart page
3. Make copies of the training timetable and program for distribution to participants
4. Write proposed training "ground rules" or "group norms"
5. Develop and print nutrition knowledge assessment pre-training exam (see Annex 1)



### Total duration 70 minutes

1. Opening and welcome (5 minutes)
2. Participant introductions and expectations (30 minutes)
3. Training objectives (15 minutes)
4. Housekeeping and norms (10 minutes)
5. Nutrition knowledge assessment (10 minutes)



### **Activity 1:** **Opening and welcome (5 minutes)**

1. Where appropriate to the community and its local customs, work may begin with prayers. In such cases, once all the participants have settled, ask a volunteer to lead in prayers before the start of the program.
2. Welcome the participants and introduce yourself and the other trainer(s). If a government official is present, they should be called upon to give their welcoming remarks to the participants and declare the meeting officially open.

### **Activity 2:** **Participant introduction, existing knowledge about good nutrition, and participant expectations (30 minutes)**

1. Ask participants to form pairs and find out their partners' names, expectations of the course, and something interesting about them (e.g., favorite food or color, hobbies, likes and dislikes).
2. Ask the participants to introduce their partners to the group.
3. Write the participants' expectations of the course on the flipchart.
4. After all the participants have been introduced, summarize and comment on the expectations.

### **Activity 3:** **Brief introduction to the project and purpose of the training (15 minutes)**

1. Present the training objectives to the participants and make a comparison with the expectations of the participants. Discuss any expectation of the participants that falls outside the scope of the workshop and clarify what the workshop will and will not achieve.
2. Post the objectives and expectations on one of the walls; keep it displayed throughout the training course.

### **Training objectives**

1. Identify various forms of malnutrition (underweight, wasting, stunting, overweight, and obesity)
2. Describe what makes a healthy diverse diet for women, children, and other family members
3. Appreciate the role of home food production in ensuring consumption of diverse diets
4. Appreciate the potential role of wild and underutilized plant species in increasing the diversity of diets to improve nutrition
5. Demonstrate practical skills in offering nutrition education, counselling, and cooking demonstrations in the community
6. Understand their role in promoting good nutrition practices in their communities

## SESSION 1: INTRODUCTION, EXPECTATIONS, NORMS, AND OBJECTIVES

### **Activity 4:** **Housekeeping and course norms (10 minutes)**

1. Ask the participants to discuss norms and rules to govern the sessions.
2. Commonly used rules include to turn phones off, raise hands when you want to talk, be mindful of time and time management, and to participate fully.
3. The group should also discuss how they will address or “punish” people who are late (such as by asking them to sing a song or give a riddle).
4. Write the norms on a flipchart and display them somewhere visible within the training hall. The rules should apply during all the sessions.
5. Show the participants the location of the washrooms.
6. Discuss meals and reimbursement of travel and other expenses.

### **Activity 5:** **Nutrition knowledge assessment (10 minutes)**

The participants are given a 10-minute assessment to determine their existing level of nutrition knowledge and to get baseline information. This also allows for the training to be adapted to participants’ needs. An example test paper is presented in Annex 1.

## NOTES

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## SESSION 2:

**NUTRITION THROUGHOUT THE LIFE-CYCLE****Introduction**

As people grow, their nutritional needs change throughout different stages in their life-cycle. These changes are necessitated by changing physical attributes, reproduction, changes in mobility, and other factors. This session is intended to orient participants to the significance of good nutrition throughout the life-cycle of an individual and how good nutrition can be achieved.

**Learning objectives**

By the end of the session, the participants will be able to:

1. Describe the various forms of malnutrition
2. Use specific criteria to identify members of the community who are vulnerable to malnutrition
3. Describe the intergenerational cycle of malnutrition and consequences of undernutrition in these priority groups
4. Identify key actions that can mitigate malnutrition and break the intergenerational cycle of malnutrition

**Materials**

1. Flipcharts
2. Marker pens
3. Pictographs of various forms of malnutrition

**Advance preparation**

1. Review the key information for each activity in this session
2. Write training objectives on a flipchart page
3. Draw the malnutrition cycle on a flipchart page
4. Print out pictographs depicting different forms of malnutrition

**Total duration 120 minutes**

1. Nutritionally vulnerable family members (20 minutes)
2. The intergenerational cycle of malnutrition (40 minutes)
3. Breaking the malnutrition cycle through maternal nutrition (30 minutes)
4. Breaking the cycle of malnutrition through early childhood nutrition (0–59 months) (30 minutes)



### Activity 1:

#### Plenary discussion – Nutritionally vulnerable family members (20 minutes)

1. Ask participants to reflect on what malnutrition means. Use the following questions to guide the discussion:
  - a. What happens when people do not consume an adequate diet? Write answers on flipchart and discuss.
  - b. Which members of the community are nutritionally vulnerable?
2. Ask participants to think about different members of the family, then ask who among them might become malnourished more easily. Discuss the responses, including reasons, and compare with the information below and fill in the gaps as needed.



### The following groups in the family are most at risk of malnutrition:

1. Pregnant and breastfeeding women because they need more energy to:
  - Support the changes in their body and feed the baby growing in their womb
  - Produce breast milk for the baby
2. Children, especially in the first two years of life, because:
  - A child born to a malnourished mother is likely to be born malnourished.
  - Their stomachs are relatively small in relation to their energy and nutrient requirements as they grow. Thus, they need frequent meals of nutrient-dense foods to have access to sufficient energy and nutrients for growth, and physical and brain development.
  - Their immune system is still developing and thus they have a high risk of infections like diarrhea which, if chronic, impacts the child's growth and consequently their learning.

The first two years is thus a period where the child is at risk of becoming chronically malnourished but also a period where poor nutritional status can be reversed if the child has access to age-appropriate food and care.



**Activity 2:**

**Plenary discussion – The intergenerational cycle of malnutrition (40 minutes)**

1. Pin on the wall or flipchart the figure of the malnutrition cycle and ask participants what they understand from the picture. Engage the participants in explaining what each part of the cycle represents.
2. Explain that undernutrition occurs in a cycle. So, if we do not break it at some point, the problem will continue from one generation to the next.
3. Ask participants:
  - What are the consequences of malnutrition in each part of the cycle?
  - How can we break this cycle of malnutrition?



**Consequences of malnutrition**

**Babies:**

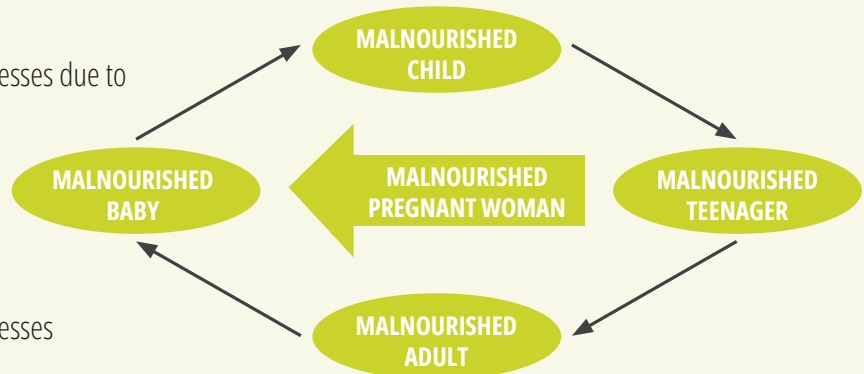
1. Increased risk of infections and illnesses due to weakened immune system
2. Stunted growth and development
3. Risk of mortality

**Children:**

1. Increased risk of infections and illnesses due to weakened immune system
2. Stunted growth and development
3. Risk of mortality
4. Weakness and tiredness leading to lower productivity and learning ability

**Women:**

1. Increased risk of infections due to weakened immune system
2. Difficult labor due to small bone structure
3. Increased risk of complications in the mother, which can lead to death during labor and delivery
4. Increased risk of death if the mother bleeds during delivery
5. Increased risk of giving birth to an underweight child who, if female, will be at greater risk of more difficult labor during her own pregnancy unless the cycle is broken





### Activity 3:

#### Group work – Breaking the malnutrition cycle through maternal nutrition (30 minutes)

1. Divide the participants into two groups, then assign one group to discuss lactating women and the other to discuss pregnant women.
2. Ask each group to discuss the dietary habits of these groups of women in their community and what advice can be given to help these women to meet their nutritional needs.
3. Allow the participants 25 minutes for discussion. Each group should then select a representative to present their work, using the flipchart paper. After each presentation, allow discussion in the plenary to bring up any additional ideas that were not discussed in the groups.



### Nutrition in the life-cycle

1. Proper nutrition of women is very important before, during, and after pregnancy to break the malnutrition cycle.
2. Women have increased and special nutritional needs during pregnancy and breastfeeding because they need to fulfil their own nutritional needs as well as those of the unborn baby during pregnancy. Similarly, during lactation they have extra nutritional needs of their own as well as those to produce adequate breast milk for the baby.
3. During pregnancy, the increased energy requirements can be fulfilled by:
  - Eating an extra meal and two snacks in addition to regular mixed meals to support the nutrition of mother and baby
  - Daily iron and folic acid supplementation (IFAS) with a meal to build iron stores and to provide enough iron to produce sufficient blood for both mother and baby
  - Avoiding dangerous substances such as alcohol, illegal drugs, and non-prescribed medicines and supplements
4. After delivery, a healthy diet helps a mother maintain her own health, breastfeed her baby successfully, and ensure that the baby grows and develops well. Therefore, a breastfeeding mother needs higher levels of most nutrients compared to a non-breastfeeding woman. The extra energy can be provided by:
  - Taking two extra meals each day in addition to the three regular meals and two snacks to support optimal nutrition and to meet lactation needs
  - Taking lots of nutritious fluids like milk, juice, porridge, non-alcoholic beverages, and drinking safe water or soups to increase the supply of breast milk

**Activity 4:****Group work – Breaking the cycle of malnutrition through early childhood nutrition (0–59 months) (30 minutes)**

1. Divide participants into three groups.
2. Ask the first group to develop strategies to break the malnutrition cycle in infancy, for children 0–6 months; the second group to do so for childhood covering 6–23 months, and the third group for childhood during the age period 24–59 months.
3. Give each group 30 minutes to discuss and make a presentation to the plenary.
4. Facilitate discussion and summary.

**Feeding infants and young children**

Always wash hands with soap (or ash) and clean water before food preparation and feeding the child.

For infants aged 0–6 months, breast milk is adequate to provide all the nutrients and water that a baby needs for growth and development. Therefore, exclusive breastfeeding on demand is recommended. If the mother wants to breastfeed:

- Initiate breastfeeding within an hour following delivery
- Encourage exclusive breastfeeding of the baby for the first six months of life, unless advised otherwise by a doctor
- Do not give any other food or drink (not even pre-lacteal feeds), except for medicines as recommended by a trained healthcare professional
- Breastfeed babies on demand – any time when they want to feed during the day and night
- Express breast milk that can be given to the baby, from a cup, when it is not possible to be with the baby

From the age of six months, breast milk is still an important source of energy and other nutrients, but it cannot adequately meet all the child's nutritional requirements. A child of this age is developmentally ready to start consuming other foods. Therefore:

- At six months of age, start complementary feeding with small amounts of food and increase the quantity as the child gets older, while maintaining breastfeeding between meals and at night up to age 24 months and beyond.
- Begin feeding twice daily with staple foods like porridge (corn, wheat, rice, millet, sorghum), or pureed banana or potato. Start with 2 tablespoons at each feed and increase to 3 tablespoons in the third to fourth week of feeding complementary foods.
- Gradually increase food consistency and variety as the child grows older, adapting to his/her requirements and abilities.
- At 7–8 months, increase the frequency of feeding to three times a day.
- Include at least one food from each food group (animal source, staple, legumes and seeds, vitamin A-rich fruits and vegetables). Add small amounts of oil to food. Enrich the food by adding milk and locally available foods e.g., avocado, peanut paste. Remember: giving a baby soup made from a food is not the same as giving the food itself.
- At the age of 9–11 months, start feeding the baby four times a day (three meals and one snack).
- From 12 months onwards, start feeding five times a day (three meals and two snacks).
- Interact with the child during meals to respond to his/her cues about the amount of food he/she wants.
- Start giving the child safe drinking water at the age of 6 months.
- Breastfeed the child more frequently during illness, in addition to meals. Provide extra food after illness – the equivalent of one extra meal per day.

For non-breastfed children aged 6–23 months, give 3–4 cups of milk in addition to complementary meals at 6 months. At 6–8 months, feed one extra meal and 1–2 cups of milk and add one snack depending on appetite. From 9 months, provide 1–2 extra meals and 1–2 cups of milk and two snacks depending on appetite.

SESSION 3:

# DIETARY DIVERSITY

## Introduction

This session will provide participants with knowledge of different foods that can be consumed to ensure good nutrition throughout the life-cycle. The aim of this session is to introduce participants to the concept of food grouping and the importance of eating foods from different food groups (dietary diversity).



### Learning objectives

By the end of the session, the participants will be able to:

1. Explain what “food” is and its role in the human body
2. Understand how food is related to health
3. Understand the rationale for grouping food into ten food groups for women and eight for young children
4. Explain what dietary diversity is and how it can be used to reduce malnutrition
5. List the different food groups and give examples of locally available foods in each group
6. Come up with a song about dietary diversity, complementary feeding, and good sanitation practices.

**Please note:** This song is to be composed by the participants themselves to support team building and to help them reflect on and remember the recommendations related to dietary diversity, and observing and practicing hygiene and sanitation. The song can be expanded over time to include any other lessons learned in the training that the facilitators would like the participants to take note of and always remember. Depending on the cultural environment, you may choose instead to play a game or act out a sketch, which should be repeated throughout the training course and used in future community activities.



### Materials

1. Food cards
2. Plastic plates
3. Flipcharts
4. Marker pens
5. Masking tape
6. Chart of the ten and eight food groups for women of reproductive age (WRA) (15–49 years old) and children aged 6–23 months respectively
7. Results from the baseline survey

**Please note:** Ideally, a baseline survey will have been conducted prior to the training, which will provide information about current dietary practices and crop diversity, as well as farming practices, to inform the next steps in the training. If there is no such baseline survey available, you may look for the respective information at the local agriculture and nutrition departments or any organization working on these topics in the target area. Alternatively, you may invite key informants from the target communities to tell the group about current practices.



### Advance preparation

1. Review the key information for each activity in this session
2. Write training objectives on a flipchart page
3. Draw charts with the ten and eight food groups for WRA and children





4. Prepare baseline findings for presentation or identify alternative sources for information on local dietary diversity scores
5. Write dietary diversity scores (DDS) for women and children on a flipchart page
6. Arrange three sets of pictures of different foods for group work on food grouping



### **Total duration 190 minutes**

1. Brainstorming on what food is and its role in the body (20 minutes)
2. Explaining the concept of a diverse diet (60 minutes)
3. Dissemination of baseline findings on dietary diversity for children and women (30 minutes)
4. Effects of poor dietary diversity on health (30 minutes)
5. Relating good nutrition to good health (20 minutes)
6. Participants compose and practice a song on dietary diversity and good health practices (30 minutes)



### **Activity 1:**

#### **Brainstorming on what food is and its role in the body (20 minutes)**

1. Engage the participants in a brainstorming session on what they consider to be food and possible reasons why people eat.
2. Listen to the various responses and then emphasize that all family members need food. It allows us to be alive, to grow, and to be active and in the case of women, it can sustain the growth of a baby during pregnancy.
3. What we eat (our diet) can maintain our health and that of our children and allows us to live a better life, or can make our health worse.
4. Refer to Session 2 on nutrition in the life-cycle to emphasize the importance of diversified food for women, children, and other family members.



### **Activity 2:**

#### **Explaining the concept of a diverse diet (60 minutes)**

1. Divide participants into groups, then distribute a set of food cards to each group.
2. Give the participants 15 minutes to look at the pictures and discuss them.
3. Ask the participants to place the foods represented by the cards into appropriate groups.
4. Ask a representative of each group to describe the food grouping chosen by their group.
5. Compare responses with the food group charts and fill in any gaps as needed.
6. List all ten food groups and ask participants to give locally available examples of food in each group:
  - Ask participants to give examples of food available in the community from each of the ten food groups and record these on the food groups chart.
  - You may present the “wheel” with the ten food groups presented in Annex 3 for visualization.
7. Explain that in addition to the ten groups, there are other important foods that contribute to the energy, vitamins, and mineral content of the diet and which should also be consumed:
  - Fats and oils, which are very rich in energy and improve the absorption of some vitamins, such as vitamin A, in our bodies and are also important for the brain development of small children. Therefore, children’s food should be prepared using fats and oils. Adults may need to balance their fat intake according to their physical activity. Another important example is salt, which adds flavor to food and contains important minerals like iodine. However, fats, oils, and salt should be balanced and not consumed in excessive amounts, to avoid overweight and obesity (fats and oils) and high blood pressure (salt).
  - Sugary and fatty snacks are considered energy-dense with little health value and therefore should be consumed only in small amounts and should not be consumed regularly.
  - Water is also very important in the body because it helps in the digestion process, in addition to quenching thirst.



## Food groups

All ten food groups are important and should be eaten in combination to complement each other. Most foods contain several nutrients, but usually one nutrient is present in a greater amount than others, hence it is important to eat foods from different groups for maximum benefit and for a healthy body.

The ten food groups are (FAO 2021):

- 1. Grains, white roots and tubers, and plantains** which are grouped together in one group and are sometimes considered staple foods as they supply most of the energy in our daily meals. Common examples from this group include all types of breads and flatbreads, stiff porridges of maize, sorghum, millet or cassava (manioc), pasta, potatoes, white-fleshed sweet potatoes, white yams, yucca, and plantains.
- 2. Pulses (beans, peas, and lentils)** which provide the body with protein and B vitamins and are a very important protein source in populations which have little or no intake of animal-sourced foods. Protein-rich foods need to be eaten regularly to maintain good health. Common examples from this group include common beans (black, kidney, pinto), broad beans (fava, field bean), chickpea (garbanzo), pigeon pea, cowpea, lentil and soybean/soybean products and other legume products.
- 3. Nuts and seeds** which are rich in fat, protein, fiber and other important nutrients relevant for health. Examples are cashew, macadamia, Brazil nut, groundnuts, sesame, pumpkin seeds, and chia seeds.
- 4. Dairy** comprises almost all liquid and solid dairy products from cows, goats, buffalo, sheep, and camels. These are important sources of high-quality protein, potassium, and calcium as well as vitamin B12 and are important to keep our bones and blood healthy. Some products are excluded as they are considered unhealthy because of very high fat or sugar content. Among these exclusions are butter, sweetened yogurt drinks, cream, and ice-cream.
- 5. Meat, poultry, and fish;** these foods are rich in high-quality protein and easily available micronutrients like iron, zinc, and vitamin B12, which help the body to stay strong and healthy. However, red meat (beef and pork) and processed meat should only be consumed in moderate amounts to avoid long-term health issues.
- 6. Eggs.** This group includes eggs from any type of bird but not fish. Eggs are well known for their high-value protein content, vitamin B12, and easily available micronutrients.
- 7. Dark-green leafy vegetables** are important contributors of preformed vitamin A, which is needed for healthy eyes, to prevent illnesses, and also for healthy growth of the foetus. Commonly consumed leaves vary widely by country and region, and include many wild and foraged species, as well as the green leaves of other food crops (e.g., cassava leaves, bean leaves, pumpkin leaves, amaranth leaves, and others). Light green-colored leafy vegetables are included in the group “other vegetables”.
- 8. Other vitamin A-rich fruits and vegetables:** Leafy vegetables that are dark green in color have high vitamin A content and are grouped separately as dark-green leafy vegetables. Vegetables that are not leafy, but which are orange on the inside, as well as fruits that are deep orange when ripe, also have high vitamin A content and are considered important contributors to maintaining good eye health and preventing illnesses. The foods grouped here may also be important sources of other vitamins like vitamin C or folate. The most common vitamin A-rich fruits and vegetables are ripe mango and ripe papaya; others include red palm fruit/pulp, passion fruit, apricot, and some types of melon, orange-fleshed sweet potato, carrot, pumpkin, and deep yellow- or orange-fleshed squash.
- 9. Other vegetables** comprise all vegetables not included under dark-green leafy vegetables or other vitamin A-rich fruits and vegetables. They are important because of their contribution of bioactive plant compounds as well as a range of micronutrients important for long-term good health.
- 10. Other fruits** include most fruits, excluding those listed under other vitamin A-rich fruits and vegetables. Examples include sweet banana, watermelon, unripe/green mangoes, gooseberries, apple, and lemon.

**Other food groups: Fats and oils** are rich in energy and improve the absorption of some vitamins, such as vitamin A. Because of the range of potential fats and oils and their different health implications, the level of processing, and a lack of adequate labelling, it is difficult to correctly capture the dietary effects of these food items. **Sugary or fried snacks** may be considered as separate food groups that are part of an unhealthy diet. **Insects** are usually eaten in amounts too small to be considered important but may be recorded and included as part of a diverse and healthy diet. However, they do not count as one of the ten food groups when calculating the dietary diversity score.



## Why diverse diets?

1. We all need food because it allows us to be alive, to grow, and to be active. Food can sustain the growth of a baby in women of reproductive age.
2. What we eat (our diet) has the power to maintain our health and that of our children and give us a better life.
3. Different foods contain different nutrients that are required by the body. Therefore, it is good to eat different types of foods to ensure that the body receives all the necessary nutrients for good health and growth.
4. All ten food groups are important and should be eaten in combination to allow them to complement each other in increasing dietary intake and utilization of various nutrients by the body.
5. To achieve the minimum dietary diversity, women of reproductive age (15–49 years) should consume foods from at least five of the ten food groups each day.
6. Young children (aged 6–23 months) should consume food from at least five of the eight food groups to obtain a diverse diet. (See Annex 3)
7. Fats and oils are important energy sources, facilitate the uptake of plant-based vitamin A, and contribute to brain development in young children. Together with salt, their intake should be balanced; adults should avoid excessive consumption of meat, fats, and oils to avoid overweight and obesity and minimize salt intake to reduce the risk of high blood pressure.
8. Regular consumption of sugary beverages and sugary snacks has long-term health consequences, therefore these should only be consumed rarely and in limited amounts.
9. We should consume underutilized foods, including wild foods, for dietary diversity.
10. Water is very important in the body because it helps in the digestion process, in addition to quenching thirst.



### Activity 3:

#### Dissemination of baseline findings on dietary diversity for children and women (30 minutes)

1. Refer to the charts with the results on dietary diversity scores for women and children.
2. Ask the participants to give their views about the results.
3. Ask them to refer to the 10 food groups learned earlier, and which foods are locally available that can be consumed to improve dietary diversity for both women and children.



### Activity 4:

#### Effects of poor dietary diversity on health (30 minutes)

1. Refer participants to the pictures in Annex 2 (well-nourished and malnourished children/adults and plants) and give them 5 minutes to study the pictures.
2. Ask them to describe the difference in the children and the possible reasons for the observed differences.
3. Ask them to look at the picture showing wasting and describe how the children look (Annex 2). Ask them to describe the difference between the two children and the possible reason for the observed difference.
4. Ask them to look at the picture showing underweight (Annex 2) and describe how the children look. Ask them to describe the difference between the two children and the possible reason for the observed difference.
5. Ask them to look at the picture showing obesity (Annex 2) and describe how the children look. Ask them to describe the difference between the two children and the possible reason for the observed difference.
6. Compare responses with the information below (in the box) and fill in gaps as needed.
7. Ask: "What can people do to improve their nutrition?" Give participants time to answer and document the responses on a flip-chart.



The difference between the children in each pair of pictures is a result of not diversifying their diets. When children and adults do not eat diversified food, or eat too much food, they become malnourished. A malnourished person is at higher risk of getting sick. When a malnourished person gets sick, it takes longer for them to get better. A malnourished woman is likely to give birth to a malnourished child who will not grow to their full potential.

- Stunting is a form of malnutrition in children. Children who are stunted are too short compared to other children of the same age and sex. This normally results when children do not get enough nutrients repeatedly over a very long time.
- Wasting is an acute form of malnutrition. Children with wasting are very thin compared to other children of the same height. This condition results when children do not get enough nutrients over a short period of time or due to illness. Such children have a high risk of dying.
- Underweight is an unspecific form of malnutrition. Children who are underweight are very thin compared with others of the same age and sex. This can be a result of a combination of both stunting and wasting.

**NOTE:** To improve nutrition, people should eat a variety of foods from all the food groups. In addition, they should prevent illness where possible and seek treatment in case of illness.



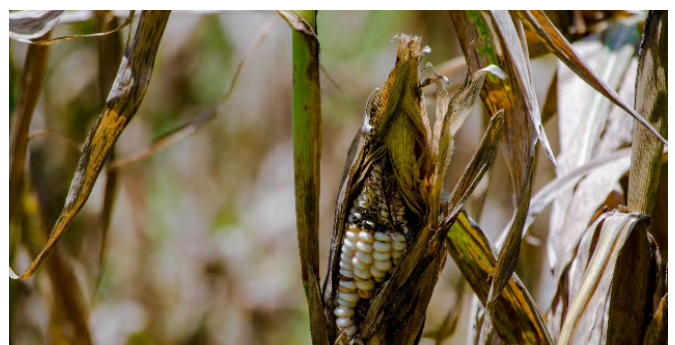
**Activity 5:**  
**Relating good nutrition to good health (20 minutes)**

Show the pictures below to the participants and ask them what they think of the crops. Ask them to give possible ways of improving the failed crops. Further, ask the participants: "If soil is not well taken care of, what will the produce be like? On the other hand, if it is fed with a lot of water and manure or fertilizer, what will happen?"

**Please note:** these pictures are also included in Annex 4 for better visualization.



Healthy versus unhealthy (failed) maize plantation (Photos: Noel Templer, Alliance of Bioversity International and CIAT)



Healthy versus unhealthy mature maize (Photos: Noel Templer, Alliance of Bioversity International and CIAT)





The soil here is the food we give to our plants. The plants are our children. If we feed them with adequate diversified and nutritious foods, they will thrive. If we deprive them or give them in excess, their growth will be affected; underweight, stunting, wasting, or obesity will result. Therefore, we should moderate and diversify our diets.

**Activity 6:**

**Participants compose and practice a song on dietary diversity and good health practices  
(30 minutes)**

Ask the participants to compose a song on dietary diversity, complementary feeding, and good sanitation practices. At the beginning and end of each session, the song may be practiced as a reminder of the lessons learned throughout the training. The song may also be used for community events as part of nutrition messaging.

**NOTES**

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**SESSION 4:**

# **FOOD SOURCES – DIVERSIFYING DIETS THROUGH THE FARM, WILD SOURCES, AND LOCAL MARKETS**

## **Introduction**

Wild edible foods are plants that grow spontaneously without being cultivated by anyone. Some wild plants are found growing within compounds, some in hedges or grazing fields, while others are found in forests. Research has shown that some wild edible plants are very rich in important nutrients including vitamins and minerals. In many communities, however, it has been reported that these valuable resources are despised and become neglected even though people are lacking these very nutrients in their diets. In this session, we will learn about some of these wild edible plants and see how they can be used to improve the nutrient intakes of households to ensure year-round consumption of diverse diets.



### **Learning objectives**

By the end of the session, the participants will be able to:

1. Discuss some of the wild edible plants in their community that have the potential to improve diets
2. Discuss the local food calendar
3. Explain how these locally available foods can be used to ensure dietary diversity at different times of the year
4. Appreciate the nutrient potential of the various wild edible plants in their community
5. Discuss ways in which the community can make use of wild plants to improve diets



### **Materials**

1. Flipcharts
2. Marker pens
3. Handouts
4. Locally available wild edible plants



### **Advance preparation**

1. Prepare a flipchart page with a table for a seasonal calendar (see template page 24)
2. Prepare marker pens in different colors for the group work
3. Create a chart with the nutrient content of some wild edible foods




### **Total duration 140 minutes**

1. Practice the song on dietary diversity, complementary feeding, and good sanitation practices composed in Session 3 (10 minutes)
2. Brainstorm locally available wild edible plants (15 minutes)
3. Local food calendar discussion and listing (90 minutes)



## SESSION 4: FOOD SOURCES – DIVERSIFYING DIETS THROUGH THE FARM, WILD SOURCES, AND LOCAL MARKETS

4. Understanding the nutritional value of selected wild edible plants (15 minutes)
5. Practice the song on dietary diversity, complementary feeding, and good sanitation practices composed in Session 3 (10 minutes)

 **Activity 1:**  
**Practice the song on dietary diversity, complementary feeding, and good sanitation practices composed in Session 3 (10 minutes)**

The participants practice and sing the song that they composed in Session 3 on dietary diversity, complementary feeding, and good sanitation practices. This will be done at the start and end of each upcoming session as a reminder of the lessons learned throughout the training.

 **Activity 2:**  
**Brainstorm locally available wild edible plants (15 minutes)**

1. Start by asking the participants whether there are any wild edible plants in their community. Then ask if they eat them, whether they like them, why they like them, and when they most frequently eat them.
2. Now ask each participant to name at least one wild plant that he or she has eaten recently or one that he or she likes most. Ask why they like it.
3. Explain that in this session, we are going to learn about wild edible plants and see how they can be used to improve diets and nutrition of members of the community, including women and children.

### NOTES

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## SESSION 4: FOOD SOURCES – DIVERSIFYING DIETS THROUGH THE FARM, WILD SOURCES, AND LOCAL MARKETS



### Activity 3:

#### Group work – Local food calendar of domesticated and wild foods (90 minutes)

1. Ask participants to form five groups. Each group is given a flipchart with a table for a seasonal calendar (see template below)
2. For each food group, the participants are to put the names of foods available in the area, listing them under the month(s) in which they are available.
3. Each group should:
  - Note the names of all the food items, including cultivated and wild edible plants available in the area throughout the year, indicating whether the food is cultivated or wild.
  - Include foods available in the market per food group by month, using a different color marker pen.
4. After the five groups have finalized and presented their lists, the facilitators shall come up with one common list of foods available in the local project area per food group per month. This will be used to develop area-specific food calendars.
5. For the wild species mentioned, discuss their nutritional and health benefits, the cooking methods, when each species is harvested, who collects them, and preferences and cultural significance or taboos surrounding their consumption.



### Fill in the calendar

Seasonal calendar for domesticated and wild foods

FOOD GROUP	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Staples: grains, roots, and tubers												
Pulses												
Nuts and seeds												
Milk and other dairy products												
Eggs												
Meat, poultry, fish												
Vitamin A-rich dark-green leafy vegetables												
Other Vitamin A-rich fruits and vegetables (orange- and yellow-colored fruits and vegetables)												
Other fruits												
Other vegetables												





**Activity 4:**

**Understanding the nutritional value of selected wild edible plants (15 minutes)**

1. Now make a presentation of the tables that you prepared in advance on manila papers or flipchart pages that describe the nutritional values of various wild edible plants.
2. The table should make a comparison with commonly consumed species: compare wild vegetables with cultivated vegetables, and wild fruits with cultivated or purchased fruits.
3. The comparison should clearly show that wild foods are of equal or superior nutritional value to cultivated foods.



**Example: Comparison of nutrient composition of cultivated and wild fruits (per 100 g)**

Nutrient	Mango	Watermelon	Orange	Ngalam	Ekalale	Esekon/ Esokon
Energy (kcal)	64	26	42	133	240	304
Protein (g)	1	1	1	3	0	15
Carbohydrates (g)	14	5	8	30	63	49
Calcium (mg)	14	4	23	8	170	875
Iron (mg)	0	1	0	1	3	300
Magnesium (mg)	9	10	10	31	unknown	125
Phosphorus (mg)	17	20	13	34	64	2500
Potassium (mg)	186	88	165	718	unknown	875
Sodium (mg)	1	2	5	3	unknown	725
Vitamin C (mg)	35	12	45	70	35	unknown



**Additional advance preparation for the following day's participatory cooking session**

1. Organize for the training venue to provide a space in which the cooking will take place.
2. Devise, in collaboration with the community and the sub-county nutritionist, recipes to be cooked.
3. Ask participants to volunteer to bring locally produced (not purchased) food ingredients required for food preparation.
4. Ask participants to bring cooking utensils (cooking pans, cooking sticks, spoons, knives, plates).
5. Ask participants to bring cooking water.
6. Ask participants to each bring a small amount of cooking fuel.
7. The facilitators will purchase other necessary items like cooking oil, salt, sugar, milk, and any other required food items that the participants are unable to bring.
8. Depending on the recipes to be prepared, pulses should be soaked the night before the workshop.



**Activity 5:**

**End the day with the song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)**

SESSION 5:

# PARTICIPATORY COOKING SESSION FOCUSED ON LOCAL RECIPES

## Introduction

This session provides a brief guide on how to conduct participatory cooking workshops. Participatory cooking workshops are a practical way of showing mothers, fathers, and caregivers how to prepare diversified diets for young children and the rest of the family using readily available local ingredients.

This session will be spearheaded by the sub-county nutritionist (or local governmental nutrition representative) with support from the project staff.



### Learning objectives

By the end of the session, the participants will be able to:

1. Enable mothers, fathers, and caregivers to gain new food preparation skills for feeding the family, including children
2. Develop their own confidence in preparing improved or new dishes
3. Show mothers, fathers, and caregivers different ways of diversifying diets using locally available food items
4. Create awareness of underutilized nutritious food ingredients that are readily available at home or in the local area
5. Guide mothers, fathers, and caregivers in how to prepare nutritious meals through hands-on participation in meal preparation, e.g., washing, cutting ingredients, and cooking
6. Gain practical skills in preparing new recipes using locally available and/or underutilized crop species
7. Organize tastings of new dishes including feedback sessions on the color, appearance, flavor/smell, and taste of new or improved dishes
8. Appreciate the nutritional value of traditional foods



### Materials

1. Food ingredients (locally available) required for food preparation
2. Cooking utensils (cooking pans, cooking sticks, spoons, knives, plates)
3. Fuel
4. Water
5. Recipes (see Annex 9)



### Advance preparation

1. Set up fireplaces
2. Pluck vegetables from stalks
3. Divide participants into cooking groups, depending on the number of recipes
4. Print the recipes





**Total duration: Covers morning and afternoon session (approximately 6 hours)**

1. Practice the song on dietary diversity, complementary feeding, and good sanitation practices composed in Session 3 (10 minutes)
2. Food preparation (180 minutes)
3. Sensory tasting and feeding trials (60 minutes)
4. Sharing experiences of food preparation and tasting (60 minutes)
5. Sharing experiences of the cooking session (45 minutes)
6. Practice the song on dietary diversity, complementary feeding, and good sanitation practices composed in Session 3 (10 minutes)



**Activity 1:**

**Start the day with the song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)**

The participants practice and sing the song that they composed in Session 3 on dietary diversity, complementary feeding, and good sanitation practices. This will be done at the start and end of each upcoming session as a reminder of the lessons learned throughout the training.



**Activity 2:**

**Food preparation (180 minutes)**

1. Explain that together, we are all going to prepare and taste dishes made using traditional and new recipes based on locally available ingredients.
2. Ensure that everybody participates in the exercise, including male facilitators and CHVs.
3. We will divide ourselves into two broad groups, where one group will prepare the recipes in the usual or traditional way and the other will use new recipes to prepare the same food.
4. Establish different cooking places for each group. Ensure some distance between the places to allow each group to work around their pot. Include one place for preparing tea.
5. Prepare two pots of the same food, for example porridge, one prepared in the usual way and the other prepared in the new way. Compare differences in consistency, and discuss the benefits of, for example, thick porridge compared to thin porridge for infant and young child nutrition.
6. Two recipes should be prepared for foods whose cooking practice is targeted for improvement, e.g., traditional leafy vegetables in which lye or soda ash is added for softening, or vegetables that are cooked for a long time, leaching out or destroying much-needed nutrients.
7. The new methods of cooking should emphasize diversity using locally available and underutilized foods and the conservation of nutrient density, color, texture, and flavor.
8. Each group will have a facilitator to oversee recipe preparation (the facilitators should not cook or stir the food themselves but can offer guidance. They should only actively assist if they are asked to do so by the participants but may support the teams by washing dishes etc.). Make sure to reinforce key behaviors such as washing hands, washing fruits and vegetables, covering food, and keeping utensils clean.
9. Discuss the number of food groups included in each recipe.
10. Discuss which recipes rely on locally available food resources, especially those that are in season.

**MY RECIPE**

**Ingredients:**

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**Procedure:**

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## SESSION 5: PARTICIPATORY COOKING SESSION FOCUSED ON LOCAL RECIPES

### **Activity 3:** **Sensory tasting and feeding trials (60 minutes)**

1. Provide one small tasting portion of each recipe to each participant.
2. Ask the participants to sit within their cooking groups.
3. Prior to eating, ask each group to individually assess the smell, color, texture, and flavor of the food.
4. Ask the cooking groups to discuss their observations.
5. If possible, ask a child of the participants or the surrounding community to taste the differently prepared dishes. Ask the child's opinion about the taste.
6. Ask the participants to observe whether and how willing the child is to eat the food offered.

### **Activity 4:** **Sharing experiences of food preparation and tasting (60 minutes)**

1. After the cooking session and the sensory tasting and feeding trials, once participants have tasted the foods prepared in the traditional and new ways, hold a discussion on participants' perceptions of the two recipes.
2. Collect feedback on their preferred cooking method, and why they prefer a particular method. Find out whether they think that community members would have difficulty making any of the foods. Discuss how to overcome these barriers.
3. Ask a representative of each cooking group to share his/her experience with the rest of the participants. Document their responses to the following questions on a flipchart to facilitate discussion:
  - What food did you prepare?
  - Did you experience any difficulties during the preparation of your recipe?
  - Do you or any other members of your group think that the community will face any barriers to making this food? How did your group think that any barriers could be addressed?

**Please note:** Annex 10 provides you with some information about expected findings from this session for further follow up.

## NOTES

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### Activity 5:

#### Sharing overall experiences of the participatory cooking session (45 minutes)

1. A volunteer from each group is to summarize the cooking session in which they have just participated.
2. The sub-county nutritionist and the facilitators will use this time to emphasize the benefits of the participatory approach and adopting and rejecting certain cultural practices related to food preparation and consumption.



### Food preparation and consumption

Emphasize the use of locally available food resources to diversify diets of children and other family members.

Foods that are in season are cheaper to acquire, therefore families should be encouraged to take advantage of seasonal surplus supply.

Enriching children's foods, such as porridge, with fruits, peanut paste, cooking oil, and other available food items increases nutrient density.

Shortening the cooking time for dark-green leafy vegetables is important for nutrient retention.

Mixing different types of traditional leafy vegetables (e.g., amaranth with cowpeas) can soften the vegetables and improve taste and remove the need to use soda ash or lye.

Women and children should consume different foods from different food groups to attain adequate nutrient intake.

Encourage the participation of male CHVs in nutrition counselling and education including training the community in food preparation.



### Activity 6:

#### End the day with the song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)

### SESSION 6:

# LINKING AGRICULTURE TO NUTRITION

Invite a representative of the agriculture extension service to conduct this session. The session itself will be spearheaded by the agricultural officer in collaboration with the training facilitators and in line with the learning objectives presented below.

## Introduction

Agriculture is fundamental to human nutrition, both as a determinant of food consumption, and through its role in livelihoods (income generation). The focus of this session is to encourage participants to appreciate the role of kitchen gardens and to inculcate practical skills in food production using simple climate-smart technologies that can be easily adapted by the community.



### Learning objectives

By the end of the session, participants will be able to:

1. Understand the benefits of setting up kitchen gardens in their homes
2. Identify suitable areas within their homes where they can set up kitchen gardens
3. Identify useful nutritious crops that they can grow in their kitchen gardens
4. Recognize modern kitchen gardening technologies
5. Design, plan, and implement their own kitchen gardens using suitable climate-smart technologies



### Materials

1. Videos on modern farming technologies
2. Sample photographs of some modern gardening techniques



### Advance preparation

1. Print handouts about various types of modern farming technologies
2. Download video(s) on modern farming



### Total duration 200 minutes

1. Song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)
2. Introduction to home gardening (30 minutes)
3. Selecting crops for the home garden (45 minutes)
4. Suitable location for and type of home garden (45 minutes)
5. Video of different garden types (45 minutes)
6. Understanding the nutritional value of selected wild edible plants (repetition of activity from Session 4) (15 minutes)
7. Song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)



**Activity 1:**

**Start the day with the song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)**

The participants practice and sing the song that they composed in Session 3 on dietary diversity, complementary feeding, and good sanitation practices. This will be done at the start and end of each upcoming session as a reminder of the lessons learned throughout the training.

**Activity 2:**

**Group work – Introduction to home gardening (30 minutes)**

1. Divide the participants into groups. Ask the groups to discuss how practical and feasible it is for individuals in their communities to feed their children, women, and the entire family a diversified diet.
2. Ask the groups to talk about how community members could broaden their food production to ensure diversity in their diets.
3. Allow the groups 15 minutes to discuss and report their ideas back in the plenary.



### **Kitchen gardens, home gardens, and vegetable gardens (see also Annex 8)**

1. Referring to the main ideas raised by the participants, explain that in this session we will talk about kitchen gardening as a way of broadening food production by families to increase the variety and diversity of their diets.
2. Kitchen gardening requires only a small space at home.
3. A kitchen garden has many benefits:
  - a. It provides a variety of food sufficient for the whole family, all year round or for several months
  - b. It is self-sufficient and requires no, or very few, inputs bought from outside
  - c. It requires little water, and you can water the plants with used water, as long as it does not contain chemicals
  - d. It requires fertile soil that you can mix yourself
  - e. It requires a small space that you choose e.g., in your compound or near your house
  - f. Home garden crop remnants are good feed for your goats and chickens
  - g. It improves or maintains good nourishment of the whole family
  - h. It takes little time and little work to tend to it
  - i. Home gardens can produce surpluses that you can sell in your village

## SESSION 6: LINKING AGRICULTURE TO NUTRITION

### **Activity 3:** **Lecture – Selecting crops for kitchen gardening (45 minutes)**

1. Ask the participants to brainstorm some of the crops that might be best to include in the kitchen garden and their reasons for choosing these crops. Use the food cards introduced at the beginning of the training (Session 3) and information collected during the seasonal calendar exercise (Session 4) to plan a home garden.
2. After a short discussion, explain that home gardening aims to provide a maximum of nutrients and other benefits in a minimum of space. Therefore, the following characteristics should be considered when selecting crops to grow in home gardens:
  - Nutrient-dense
  - Continuous production
  - Good for various purposes (multi-purpose crops)
  - Easy to grow and to store
  - Fast growth and high yield
  - Requiring little water
  - Do not exhaust the soil
3. Ask the participants to list some of the crops in their community that can be grown or that they are already growing that have these characteristics.
4. Discuss the list and agree on two or three crops for participants to grow in their communities after the workshop.

### **Activity 4:** **Brainstorming – Selecting a suitable space and type of home garden (45 minutes)**

1. Ask the participants to brainstorm some of the factors that one should take into consideration when selecting a space for putting up a kitchen garden.
2. Remind the participants to take into consideration the information that they have already learned about what a kitchen garden is and the type of crops that can be grown.
3. Write down on a flipchart the suggestions listed by the participants. The factors to look for include:
  - Protected from roaming animals (within an existing enclosure that you can easily repair)
  - Not far from your home (within your compound, if suitable)
  - Not far from a water point (if you need water in addition to the household wastewater)
  - Offering both sun and shade
4. Now distribute copies of the handout on different kinds of home gardens. Ask the participants to study them and give their views. Do they like them? Would they be able to maintain some of the gardens shown in the handout?
5. Discuss the responses and follow up with a practical demonstration in each of the communities from which the participants come.

## NOTES

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**Activity 5:**  
**Video of different garden types (45 minutes)**

1. Present visuals of different garden types. Annex 5 provides links to videos of sack gardens. You may also present pictures of kitchen gardens in the target communities or from other projects.
2. Reflect on the visuals with the participants, based on the following questions:
  - a. Which crops could you see?
  - b. What is the nutritional value of these crops?
  - c. How can they be prepared?
  - d. Are they suitable for all family members?
  - e. Is it something you can do at home?



**Activity 6:**  
**Understanding the nutritional value of selected wild edible plants (15 minutes)**

1. Refer to the discussion and reflection on this topic in Session 4.
2. Ask the participants which wild plants may be included in their kitchen garden.



**Activity 7:**  
**End the day with the song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)**

**NOTES**

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SESSION 7:

# INTEGRATING NUTRITION PROMOTION IN COMMUNITY HEALTH VOLUNTEERS' WORK

## Introduction

The aim of this session is to identify, discuss, and agree with the community health workers on the role they will play in the project, as well as identify opportunities for integrating nutrition education in the project and beyond. This will enable participants to build personal and group commitment to integrate nutrition promotion into their own activities and community work.



### Learning objectives

By the end of the session, the participants will be able to:

1. Understand the goal and objectives of the project
2. Describe the roles and tasks of the community health volunteers in the project
3. Identify opportunities to integrate nutrition into regular work plans and activities
4. Explain exactly what he or she will do to integrate nutrition promotion activities into his or her own work



### Materials

1. Flipchart paper
2. Marker pens
3. Post-training test
4. Video on role of CHVs in nutrition education and counselling
5. Certificates



### Advance preparation

1. Print post-training test
2. Print and write names on certificates
3. Download video(s) on nutrition counselling and education
4. Print reporting tools for the participants, e.g. community health volunteers (CHVs) and community health extension workers (CHEWs)



### Total duration [255 minutes]

1. Song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)
2. Recapitulation of previous sessions (30 minutes)
3. Post-training test (10 minutes)
4. Role play on nutrition education and counselling (30 minutes)
5. Video on nutrition education and counselling (15 minutes)
6. Explore the role of CHVs (45 minutes)
7. Review the reporting tools (60 minutes)
8. Graduation ceremony (45 minutes)
9. Song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)



**Activity 1:**  
**Song on dietary diversity, complementary feeding, and good sanitation practices**  
*(10 minutes)*

The participants practice and sing the song that they composed in Session 3 on dietary diversity, complementary feeding, and good sanitation practices. This will be done at the start and end of each upcoming session as a reminder of the lessons learned throughout the training.



**Activity 2:**  
**Recapitulation of the first three days of training (30 minutes)**

1. Review all the sessions' objectives and activities. This will be done through peer-to-peer learning.
2. Each session will be reviewed by a volunteer from the class. S/he will guide the class through the topics covered each day and discuss with the rest of the class the lessons learned.



**Activity 3:**  
**Post-training test (10 minutes)**

The same test that was administered before the training is administered again after the three-day training to assess whether the participants have gained additional knowledge. The results do not impact graduation but constitute part of the training monitoring and evaluation, i.e., to find out which sessions were successful and which sessions need to be repeated or changed in future trainings to achieve appropriate learning outcomes.



**Activity 4:**  
**Role play - Nutrition counselling and education by community health volunteers**  
*(30 minutes)*

1. Ask 2–3 participants to volunteer for the session. One will take the role of a CHV and the other two will represent a household. The CHV will make a house visit for nutrition counselling and education.
2. The other participants will watch and listen to them.
3. After the role play, ask the rest of the participants to give their observations of the session.

**NOTES**

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**Activity 5:**  
**Video on nutrition education and counselling for additional practical lessons (15 minutes)**

Provide visuals about different sitting arrangements and dialoguing and nutrition education practices (see proposed video in Annex 5). Provide an opportunity to discuss the visuals.

 **Nutrition counseling and education**

DOs	DON'Ts
<ul style="list-style-type: none"> <li>• Carry education materials</li> <li>• Introduce yourself to the household</li> <li>• Ask the household whether they have some time for you</li> <li>• Be kind and respectful throughout the session</li> <li>• Request the caregiver to speak for a moment, to hear from them and identify areas to help them improve</li> <li>• Maintain eye contact</li> <li>• Listen keenly with interest in what the caregiver is saying</li> <li>• Recognize and praise good practices and encourage them to keep these up</li> <li>• Offer advice on where and how to improve</li> <li>• Refer them to the nearest health facility if needed</li> </ul>	<ul style="list-style-type: none"> <li>• Do not be judgmental in your words</li> <li>• Do not scold the caregiver about inappropriate practices, instead give suggestions of ways to improve</li> <li>• Do not talk to the household while sitting on a chair if they are standing or sitting on the ground</li> </ul>

**Activity 6:**  
**Group work - Exploring the role of community health volunteers (45 minutes)**

1. Break up into small groups of two or three participants.
2. Ask each group to discuss how they would integrate nutrition education into their work as individuals. Ask them to be specific and creative. They should answer the following question:

***What could you do with members of your communities to promote recommended nutrition practices?***

- Encourage them to keep in mind the activities and tasks with which they are already engaged and make sure that their ideas are feasible (that they have time and the opportunity to integrate nutrition).
3. Ask the groups to discuss whether they anticipate any difficulties associated with their suggestions for what to do and how to do it. What (or who) would they need to help them to be able to implement their suggestions?
  4. Give the groups about 15 minutes to brainstorm and discuss.
  5. Bring the groups back together and call on participants to provide their thoughts and suggestions.
  6. Summarize the key ideas presented by individuals and groups and reinforce the main messages of integrating nutrition education into community-based activities.
  7. Capture the information on the prepared flipchart.
  8. Close the session by summarizing some of the main ideas and key points.

- Document the group results on a flipchart based on the following guiding questions: Which activity are you doing? Can nutrition education be included in this activity? How can nutritional aspects be included?

**Activities of community health volunteers and opportunities to integrate nutrition**

Activity of CHV	Tick if nutrition education can be included in the activity	How can nutritional aspects be included in the activity?


 **Activity 7:**  
**Reporting tools for household visits by CHVs and CHEWs (60 minutes)**

If the CHVs (training participants) agree to participate in the project, they are expected to conduct door-to-door nutrition education in their respective villages. The reporting tools will enable them to record the households they have visited, and the topics covered. They will submit reports to their supervisors, e.g. CHEWs weekly. The CHEWs will compile the reports and share with the project coordinators on a monthly basis. See Annex 6 for a copy of the reporting tools.

- Clarify who will participate in the project.
- Introduce the reporting tools and the mode of communication in the upcoming activities.

 **Activity 8:**  
**Graduation ceremony (45 minutes)**

All the workshop participants are given a certificate indicating their full participation in all of the workshop sessions. Please remember what has been agreed upon in the introduction session: how many sessions do participants need to attend to be able to get their certificate? The certificate rewards participation rather than test results.

 **Activity 9:**  
**Finish the workshop with the song on dietary diversity, complementary feeding, and good sanitation practices (10 minutes)**

ANNEXES

# Annex 1: Pre- and post-training nutrition knowledge assessment (translate into local language if possible)

**1. Which of the following terms does not describe food?**

- A. Carbohydrates
- B. Water
- C. Vitamin
- D. Protein

**2. What should a 0–6-month-old baby be fed?**

- A. Porridge and milk
- B. Breastmilk and porridge
- C. Mashed food
- D. Breastmilk only

**3. How many food groups should a child's diet (6–23 months old) cover at minimum in a day?**

- A. 3
- B. 2
- C. 4 and above
- D. All the above

**4. Why do we eat? (Choose the most appropriate)**

- A. To be alive
- B. To be active
- C. To grow
- D. All of the above

**5. The diet of a woman of reproductive age (15–49 years) should cover at minimum how many food groups in a day?**

- A. 5 and above
- B. 3
- C. 4
- D. 2

**6. What is stunting?**

- A. Child is very tall
- B. Child is very thin
- C. Child is short compared to other children of the same age
- D. Child is very fat



**7. What are the effects of stunting in a child? (Choose the most appropriate)**

- A. Low performance in school
- B. Slowed growth
- C. Getting sick quite often
- D. All of the above

**8. Which groups in the community are at risk of malnutrition? (Choose as many as appropriate)**

- A. The elderly
- B. Women and children
- C. Children
- D. Everyone

**9. What are the barriers to feeding a child a diversified diet?**

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**10. What are your roles to improve the nutrition situation in the community?**

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## Annex 2: Materials which may be used to help discussion of various forms of malnutrition

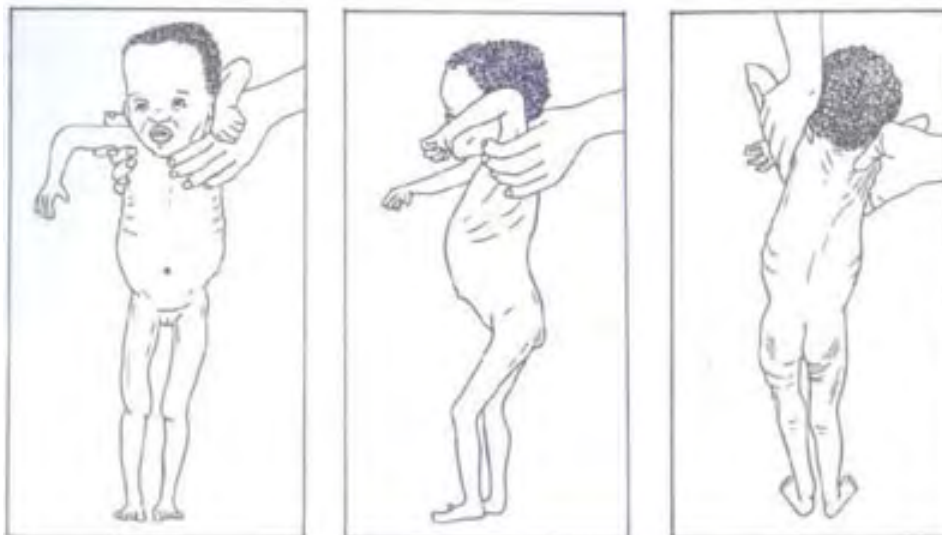
### A. Stunting means you're too short for your age



Source: <https://bit.ly/3yxuyAA><sup>1</sup>

### B. Wasting

Child has no swelling, very underweight, no fat tissue, "old man's face," may look anxious, sagging skin and buttocks

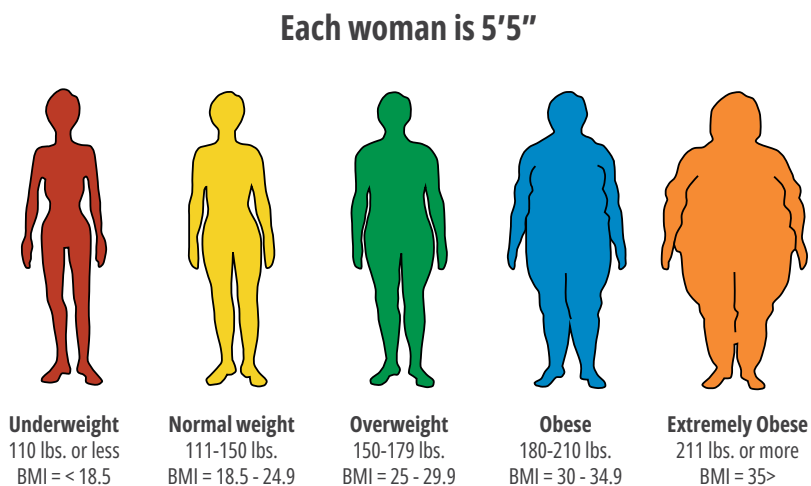


Source: Ethiopian Federal Ministry of Health, 2010, Training course of the out patient treatment programme of severe acute malnutrition, see also: <https://www.open.edu/openlearncreate/course/view.php?id=20>

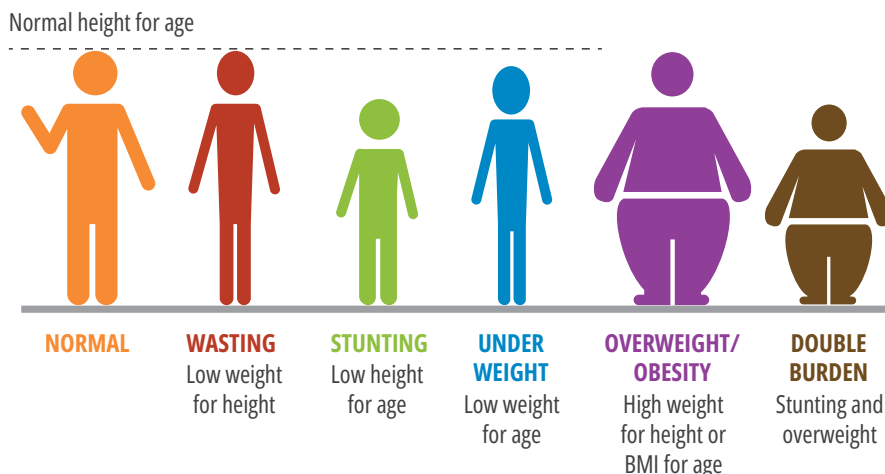
<sup>1</sup> [http://apps.who.int/iris/bitstream/handle/10665/149019/WHO\\_NMH\\_NHD\\_14.3\\_eng.pdf;jsessionid=C5B785A8E9612E0468E-3B96A06435270?sequence=1](http://apps.who.int/iris/bitstream/handle/10665/149019/WHO_NMH_NHD_14.3_eng.pdf;jsessionid=C5B785A8E9612E0468E-3B96A06435270?sequence=1)



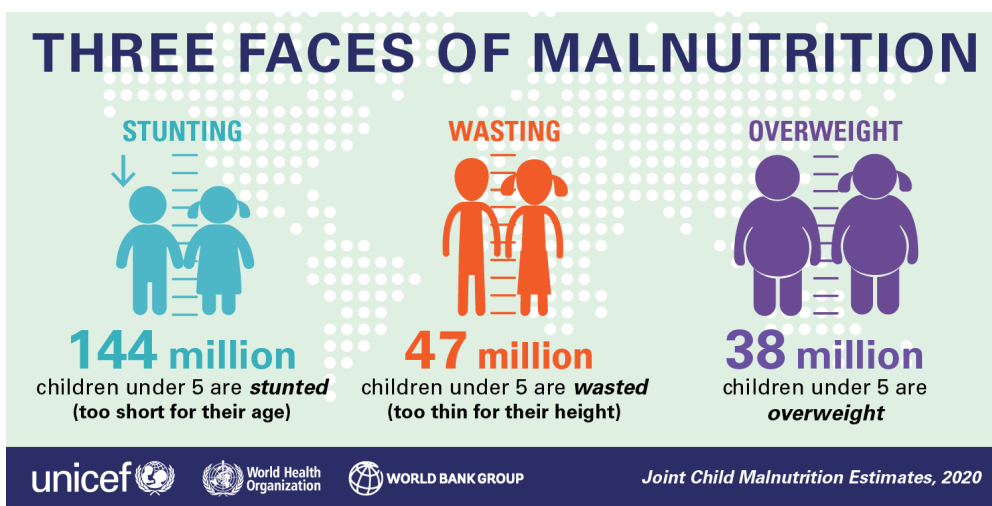
C. Various forms of malnutrition among adults based on body mass index



D. Various forms of malnutrition among children and families



or Three faces of malnutrition (<https://scalingupnutrition.org/wp-content/uploads/2020/04/JME-2020-twitter1.png>)



## Annex 3: The food groups for adults and for children 6-23 months of age

The ten food groups for adults:



**Source:** Ministry of Agriculture. Community Dialogue Cards on Agri-Nutrition [Internet]. Kenyan Ministry of Agriculture; 2021. Available from: <https://kilimo.go.ke/wp-content/uploads/2021/01/Community-Dialogue-Cards-on-Agri-Nutrition.pdf>

## The eight food groups for children of 6–23 months of age are:

1. **Breast milk**
2. **Grains, roots, and tubers:** Porridge, bread, rice, noodles, or other foods made from grains
3. **Legumes and nuts:** any foods made from beans, peas, lentils, nuts, or seeds
4. **Dairy products:** infant formula, Milk such as tinned, powdered, or fresh animal milk, yoghurt, cheese or other milk products
5. **Flesh foods:** meat, fish, poultry, liver or other organs
6. **Eggs**
7. **Vitamin rich fruits and vegetables:** pumpkin, carrots, squash, or sweet potatoes that are yellow or orange inside; any dark green leafy vegetables; ripe mangoes, ripe papayas (or any other locally available vitamin A-rich fruits); foods made with red palm oil, red palm nut, red palm nut pulp sauce
8. **Any other fruits and vegetables:**

## Annex 4: Pictures to show parallels between plant and human health

### A. "Healthy" and "unhealthy" fields



Photo credits: Noel Templer, Alliance of Bioversity International and CIAT



## B. Healthy maize cob and maize cob infested by pests and diseases



Photo credits: Noel Templer, Alliance of Bioversity International and CIAT

## Annex 5: Video resources for the training



The Nutrition Counselling Visit for Young Children - Nutrition Series

**Nutrition education and counselling** (Global Health Media Project, June 13, 2018)

<https://youtu.be/RBGZ44NbeoU>



Tips on what to feed infants and young children | UNICEF

**Complementary feeding** (UNICEF, August 1, 2018)

<https://youtu.be/Xdu-MonY4-U>



How Much and How Often to Feed the Young Child - Nutrition Series

**How much and how often to feed the young child** (Global Health Media Project, June 8, 2018)

<https://youtu.be/ZgBtTZQMF4k>



Using sack mounds to grow vegetables (Summary)

**Using sack mounds to grow vegetables** (Access Agriculture, October 3, 2019)

[https://youtu.be/Wq\\_8jcm9kuM](https://youtu.be/Wq_8jcm9kuM)



Women in Kibera Slums Use Sacks to Grow Vegetables

**Women in Kibera slums use sacks to grow vegetables** (Citizen TV, July 24, 2013)

<https://youtu.be/1c3XrHTya6w>



Easy Icebreaker Activities: The Numbers Game

**Icebreaker game**

<https://youtu.be/bQebzv8sShE>

# Annex 6: Reporting tools



Alliance



TOOL 1: Community Action Plans Monitoring and Reporting - COMMUNITY HEALTH VOLUNTEER (CHV) DATA COLLECTION TOOL		
County Name.....		Ward Name.....
CU Name.....		CHV Name.....
Village Name.....		Group Name.....
Reporting Period: From.....To.....Month.....		
Interventions	Segregation	Month.....
<b>1. Home gardening</b>		
Total number of Households in the community	HHs	
Number of group demonstration gardens in the community?		
Number of group members currently with kitchen gardens	Male = Female =	Total=
Number of non-group members with kitchen gardens?	Male = Female =	Total=
Crops grown?	1 2 3	
Number of group members who harvested vegetables from their gardens in the past one week	Male = Female =	Total=
Number of non-group members who harvested vegetables from their kitchen gardens in the past one week.	Male = Female =	Total=
How many group members have sold vegetables from the garden?	Male = Female =	Total=
How many non-group members have sold vegetables from the garden?	Male = Female =	Total=
Main challenges facing kitchen gardens in the past week.		
<b>2. Village Savings and Loans</b>		
What is the name of the group		
How many members of this group are registered to participate in the VSLs?	Male = Female =	Total=
How many times did the group meet in the past week?		
What was the total members' contribution for the previous month?	KES	
How many members borrowed money from the VSL?	Male = Female =	Total=
How many members paid their loans in time?	Male = Female =	Total=
How much money did members borrow in this past one week?	KES	
What was the main reason for borrowing the money?		
How many members have started income generating activities (IGAs)?	Male = Female =	Total=
Explain challenges faced by the group in the past month in regards to VSLs.		
<b>3. Poultry</b>		
Number of group members practicing poultry rearing	Male = Female =	Total=
Number of community members practicing poultry rearing	Male = Female =	Total=
Number of group members that sold poultry and/or poultry products in the last one week.		
How much did the group members (above) make from the sale of poultry and/or poultry products?	KES	
<b>4. Nutrition education/Counseling</b>		
Number of households that received nutrition education and counselling from CHV in the past one week.	No of Households= _____	<b>Beneficiaries in the households</b> Male= Female= Total=
Main topics covered?	1 2 3	
How many households set up kitchen gardens after receiving education from group members in the past one week? (to be answered by the CHVs in the groups)	No of Households= _____	<b>Beneficiaries in the households</b> Male= Female= Total=

**TOOL 1: Community Action Plans Monitoring and Reporting - COMMUNITY HEALTH EXTENSION WORKERS (CHEW) DATA COLLECTION TOOL**

County Name.....	Ward Name.....	
CU Name.....	CHEW's Name.....	
Reporting Period.....	Month.....	
<b>Interventions</b>	<b>Segregation</b>	<b>Number/Quantity</b>
<b>1. Home gardening</b>		
Number of CHV who reported within the month	Male:	Total=
	Female	
Total number of Households in the community Unit	HHs	
# of group or demonstration gardens?		
# of group members currently with kitchen gardens	Male =	Total=
	Female =	
# of non-group (community) members with kitchen gardens?	Male =	Total=
	Female =	
Crops grown?	1	4
	2	5
	3	6
#of group members who harvested vegetables from their gardens in the past one month	Male =	Total=
	Female =	
#of non-group members who harvested vegetables from their gardens in the past one month	Male =	Total=
	Female =	
How many group members have sold vegetables from their garden?	Male =	Total=
	Female =	
How many non-group members sold vegetables from their garden?	Male =	Total=
	Female =	
Main challenges faced in the kitchen gardening in this past month?		
<b>2. Group Savings and Loans (for those in groups)</b>		
Number of group members registered to participate in the VSLs?	Male =	Total=
	Female =	
How many times did the group meet in the past month?	Number of meetings	
Total group members' contribution for the previous month?	KSHs	
How many members borrowed money from the VSL?	Male =	Total=
	Female =	
How many members paid their loans in time?	Male =	Total=
	Female =	
Total amount borrowed by members in the past one month	KSHs	
Main reasons for borrowing the money?		
How many members have started income generating activities (IGAs)?	Male =	Total=
	Female =	
Explain any challenges faced by the group in the past month in regards to VSLs.		
<b>3. Poultry</b>		
Number of group members practicing poultry rearing	Male =	Total=
	Female =	
Number of community members practicing poultry rearing	Male =	Total=
	Female =	
Number of households (among group members) that sold poultry and/or		
How much did the households above make from the sale of poultry and/or		
poultry products	KSHs	
<b>4. Nutrition education/Counseling</b>		
Number of Households reached with nutrition education and counselling in the	No. of HH:	
Number of beneficiaries reached with nutrition education and counselling in the	Male:	
past month.	Female:	
	Total:	
Which topics were covered?	1	
	2	
	3	



# Annex 7: Sample of participant certificate



## Annex 8: Various forms of modern farming technologies



Garden in Banana trunks: <https://www.youtube.com/watch?v=nDtHkvl00ro>, <https://www.youtube.com/watch?v=GdWrmfR0B7k>



Zai pits : <https://www.youtube.com/watch?v=qduPCK8L4Jo>



Sack garden (multi-storied garden): <https://www.youtube.com/watch?v=P2E3whMDvNc>





Sack garden (multi-storied garden): <https://www.youtube.com/watch?v=P2E3whMDvNc>



Tire garden: [https://www.youtube.com/watch?v=z\\_PDLKlDeWU](https://www.youtube.com/watch?v=z_PDLKlDeWU)



Grow bags gardens: <https://www.youtube.com/watch?v=P6cwCg86riA>

# Annex 9: Recipes and exemplary outcomes of participatory cooking sessions

Recipes and objectives for choosing them:

- 1. Enriched porridge** – to demonstrate different ways in which porridge can be enriched using items that are readily available
- 2. Mixed vegetables** – cooked in two different ways: using the improved recipe and the traditional way to demonstrate how vegetables should be cooked to retain their nutritional value
- 3. A mixture of pounded cassava and beans** – to promote soaking of beans
- 4. Milk tea** – to demonstrate how to balance the ratio of water to milk to ensure that children benefit from the nutrients present in the milk
- 5. Omena** – to demonstrate that meats, fish, and poultry can be pounded and incorporated into a child's diet as part of complementary feeding

## 1. Recipe for enriched porridge

### Ingredients:

2 cups millet flour  
1 medium-sized orange  
1 tablespoon peanut paste  
1 banana (mashed)  
1 teaspoon cooking oil  
Sugar to taste

### Procedure:

- Pour 8 cups of water into a pan and bring to boil
- Make a thick paste using the millet flour
- Add the prepared paste slowly and continue stirring until it thickens (the final consistency should be neither too thick nor too runny)
- Simmer for about 10 minutes and add sugar to taste
- Divide the porridge into four portions
- To the first portion, add peanut paste and stir until fully mixed
- To the second portion, add squeezed orange juice and stir until fully mixed
- To the third portion, add the mashed banana and stir until fully mixed
- To the fourth portion, add cooking oil and stir until fully mixed
- Serve



Preparing porridge for enrichment

## 2. Recipe for mixed vegetables

### Ingredients:

2 bunches cowpea leaves (kunde)  
1 bunch jute mallow (mrenda)  
1 bunch amaranth (dodo)  
1 bunch sun hemp (mitoo)  
2 medium-sized onions (chopped)  
5 medium-sized tomatoes (chopped)  
2 tablespoons cooking oil  
Salt to taste



Preparing mixed vegetables

**Procedure:**

- Remove the stalks from the vegetables
- Wash and set aside to allow the water to drain
- In a clean pan, heat cooking oil and add the chopped onions
- Allow the onions to cook until they are tender
- Add chopped tomatoes and allow them to cook until soft
- Add the vegetables, mix, cover, and allow them to simmer for 5 minutes
- Add salt to taste and allow the vegetables to cook for 1 minute
- Serve

### 3. Recipe for cassava and beans mixture

**Ingredients:**

- 1 kg beans (soaked overnight)
- 5 medium-sized cassava roots (peeled)
- 3 medium-sized tomatoes (chopped)
- 2 medium-sized onions (chopped)
- 4 tablespoons cooking oil
- Salt to taste

**Procedure:**

- Pour water into a pan and bring to boil
- Rinse the soaked beans and add to the boiling water
- Cover and let the water boil until the beans are cooked
- In a separate pan, add cooking oil and allow it to heat
- Add onions and cook until tender
- Add tomatoes and cook until soft
- Add salt to taste
- In a separate sufuria, boil cassava until cooked
- Add the cooked beans into the cassava
- Pound the mixture to a desired texture
- Serve



Preparing the cassava and beans mixture

### 4. Recipe for milk tea

**Ingredients:**

- 2 liters of milk
- 2 liters of water
- 1 tablespoon tea leaves
- ¼ cup sugar

**Procedure:**

- Pour milk into a clean pan and bring to boil
- Add water and allow it to boil
- Add tea leaves and sugar and let the tea boil for 2 more minutes
- Serve



Preparing milk tea

## 5. Recipe for omena

### Ingredients:

- 1 kg omena
- 2 medium-sized onions (chopped)
- 5 medium-sized tomatoes (chopped)
- 2 tablespoons cooking oil
- Salt to taste

### Procedure:

- Sort the omena and remove dirt
- Wash omena with warm water
- In a clean pan, heat cooking oil and add the chopped onions
- Allow the onions to cook until they are tender
- Add chopped tomatoes and allow them to cook until soft
- Add the omena, mix, cover, and cook for 10 minutes
- Add salt to taste and allow the omena to cook for 1 minute
- Pound the omena into a consistency that can be tolerated by a child
- Serve



Preparing omena

**Photo credits (Annex 9):** Save the Children, Bungoma Office.

## Annex 10: Example outcome of tasting and feedback session

### a. Feedback for enriched porridge

Some participants were astonished by the fact that porridge can be enriched using cooking oil. After tasting the different porridges, all the participants agreed that the enriched porridge samples would be accepted by children due to their improved taste. Additionally, a child was brought in and given porridge enriched with mashed banana which she enjoyed eating.



Porridge enriched with orange juice



Porridge enriched with mashed banana



Porridge enriched with cooking oil



Porridge enriched with peanut paste

## b. Feedback for mixed vegetables

Vegetables cooked with soda ash and vegetables cooked using the improved recipe were served on two different plates, labeled A (improved recipe) and B (with soda ash). Feedback was given based on cooking time, fuel consumption, color, taste, and texture as summarized in the table below.



Vegetables cooked using the improved recipe



Vegetables cooked with soda ash

### Example of scoring different attributes for the different recipes

Attribute	Score for Vegetable A (improved recipe)	Score for Vegetable B (with soda ash)
Less cooking time	1	0
Less fuel consumption	1	0
Appealing color	0	1
Appealing taste (tolerated by a child)	1	0
Softer in texture	0	1
<b>Total score</b>	<b>3</b>	<b>2</b>

**Photo credits (Annex 10):** Save the Children, Bungoma Office.







The Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT) is part of CGIAR, a global research partnership for a food-secure future.

Bioversity International is the operating name of the International Plant Genetic Resources Institute (IPGRI).

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