



Food and Agriculture Organization  
of the United Nations



# Global capacity needs assessment methodology

Integrating nutrition objectives into  
agricultural extension and advisory services  
programmes and policies



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## ► ABBREVIATIONS AND ACRONYMS

- CNA** capacity needs assessment
- DDS** dietary diversity score
- EAS** extension and advisory services
- NGO** non-governmental organization
- NSA** nutrition-sensitive agriculture

# 1 INTRODUCTION

## 1.1 Rationale

Ensuring that everyone has access to and consumes enough food that is culturally acceptable, affordable, nutritious and healthy presents a grand challenge as we look towards achieving the Sustainable Development Goals (Development Initiatives, 2018). The agricultural sector presents key opportunities for improving nutrition and health as it can provide food of sufficient quantity and quality to feed and nourish the world's population. However, to achieve this requires that agriculture is nutrition sensitive. A growing number of governments, donor agencies and development organizations are committed to supporting nutrition-sensitive agriculture (NSA) to achieve their development goals (Ruel, Quisumbing and Balagamwala, 2018).

Equipping agricultural extension and advisory services (EAS) with nutrition knowledge, competencies and skills is essential to promoting NSA. However, capacity-development efforts need to be strengthened among EAS (Box 1) through a systematic approach based on a better understanding of needs, challenges and interactions at and among all institutional levels, from front-line workers to policymakers.

## 1.2 Why global capacity needs assessment?

A global capacity needs assessment (GCNA) in this context aims to understand learning gaps, needs and obstacles to integrating nutrition-related objectives into agricultural programmes and policies. The assessment methodology aims at

- exploring all the opportunities and challenges to integrate nutrition-related objectives into agricultural programmes and policies;
- identifying capacity needs of the EAS providers and at the organizational and policy/enabling-environment levels for strengthening capacities to integrate nutrition outcomes in their regular tasks and responsibilities; and
- identifying knowledge gaps in training materials on NSA.

## 1.3 Intended audience

This methodology is aimed at EAS managers and practitioners, nutrition experts, research scholars and other stakeholders from the national and state governments, development agencies, donors and other investors who are interested in promoting NSA.

## 1.4 What is unique about this methodology?

While methodologies are available to assess nutrition-related knowledge, attitudes and practices

### BOX 1 ➤ EXTENSION AND ADVISORY SERVICES

This document uses the definition of extension or extension and advisory services (EAS) articulated by the Global Forum for Rural Advisory Services. This states that EAS consist of "all the different activities that provide the information and services needed and demanded by farmers and other actors in rural settings to assist them in developing their own technical, organizational and management skills and practices so as to improve their livelihoods and well-being" (Sulaiman and Davis, 2012). It encompasses the diversity of actors in extension and advisory provision, much broadened support to rural communities (beyond information and knowledge) and new functions such as facilitation, intermediation and brokering by EAS. These services are provided by diverse agencies representing the public sector, private sector, non-governmental organizations, producer organizations, lead farmers and individual consultants.

SOURCE: the authors



(e.g. FAO, 2014) there are very few methodologies that examine the capacity gaps at all three dimensions of capacity (individual, organizational and enabling-environment levels) (FAO, 2015a; Mittal, Sulaiman V. and Prasad, 2016). Although there is a framework for assessing nutrition capacity (SUN, 2016), it is not specific for assessing the capacity gaps in EAS to deal with NSA interventions.

This guide builds on existing efforts while offering a unique and innovative methodology that aims to overcome the current shortcomings. Its added value consists in:

- providing a rationale for promoting NSA and the role of EAS in helping smallholder farmers and livestock keepers to improve nutrition;
- flagging capacity gaps at the individual, organizational and enabling-environment level;
- highlighting the importance of organizing learning/capacity assessment;
- indicating the types of information that need to be collected and the process for collecting such information from published sources, key informants (directly and indirectly engaged in addressing nutrition through agriculture and other interventions) and communities;
- helping understand the extent of linkages among organizations in different sectors that are critical for addressing NSA, including good practices, if any;
- presenting draft checklists of questions for collecting information on different aspects of capacity; and
- suggesting an outline to share data and information.

The draft methodology was pilot tested in Chile, Côte d'Ivoire, India, Malawi and Tajikistan and was revised based on the experiences and lessons learned. The GCNA is not a prescriptive, one-size-fits-all methodology; rather, it aims to provide decision makers with the knowledge they need to adapt the suggested steps to their local context and add other relevant additional questions.

## ► 2 NUTRITION-SENSITIVE AGRICULTURE AND EXTENSION AND ADVISORY SERVICES: A REVIEW

According to FAO (2017), "Nutrition sensitive agriculture is an approach that seeks to ensure the production of a variety of affordable, nutritious, culturally appropriate and safe foods in adequate quantity and quality to meet the dietary requirements of populations in a sustainable manner. The recognition that addressing nutrition requires taking action at all stages of the food chain – from production, processing, retail to consumption – has led to a broader focus which encompasses the entire food system." This approach stresses the multiple benefits derived from enjoying a variety of foods, recognizing the nutritional value of food for good nutrition and the importance and social significance of the food and agricultural sector for supporting rural livelihoods. The overall objective of NSA is to contribute to the sustainability of the food systems for delivering healthy diets towards better nutrition outcomes.

A systematic review of 44 studies on NSA published since 2014 concluded that: "Agriculture should focus on improving dietary diversity and high quality diets as precursor to better nutrition outcomes" (Ruel, Quisumbing and Balagamwala, 2018).

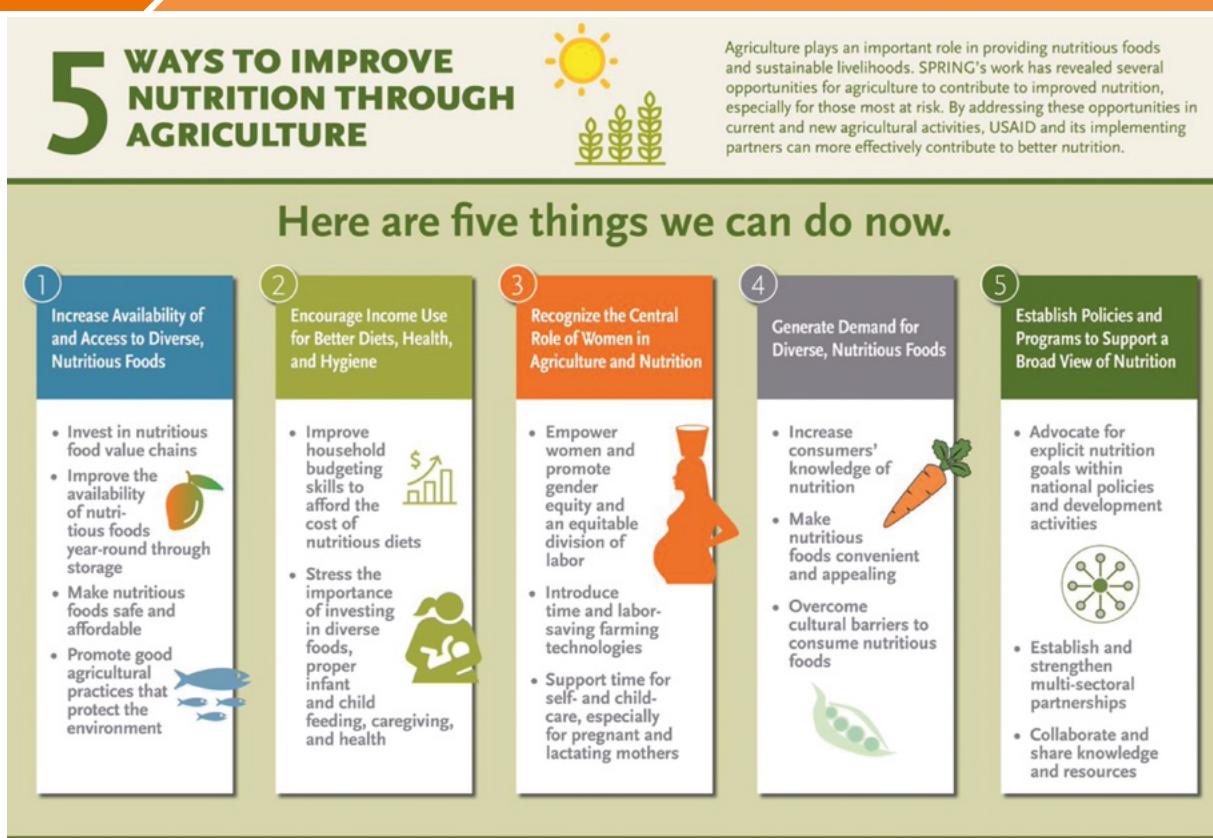
The M S Swaminathan Research Foundation led a multi-country multi-institutional research programme consortium – Leveraging Agriculture for Nutrition in South Asia from 2012–2018, to examine how agriculture and agri-food systems can be better designed to advance nutrition. It undertook a feasibility study in India of a farming system for nutrition (FSN) approach to address the problem of undernutrition. The thrust of the FSN design was on increasing availability of nutrient-dense crops, viz. millets and pulses; promoting nutrition gardens of fruits and all three groups of vegetables; promoting access to animal foods—e.g. poultry and fish; and promoting awareness across the board on the nutrient content of different foods, the requirement across different phases of the lifecycle from infancy to old age, and the importance of eating right. Following sustained intervention over a period of three years, there was evidence of increased intake of all food groups in terms of both quantity and frequency. Production diversity accompanied by better nutrition awareness translated into household consumption diversity (Bhavani, 2019).

NSA can be implemented through agricultural production and income pathways. However, it also requires interventions addressing the other components of the food system, including women's empowerment and gender equality; food trade and marketing; consumer education and social norms; food handling, storage and processing; food quality, safety and hygiene, and with investments in other relevant sectors such as, water, sanitation, health, education and social protection (FAO, 2017).

Agricultural production and income pathways for NSA can be implemented in three areas:

- **Making healthy diets more available and accessible.** Increasing agricultural production can increase the availability and affordability of some foods. Sustained income growth in turn has a sizeable effect on reducing some forms of undernutrition.
- **Making food production more diverse and more sustainable.** Increasing diversity in food production and promoting sustainable production practices such as conservation agriculture, water management and integrated pest management can improve nutrition levels without depleting natural resources. Diversified family farming, home gardens and homestead food production projects can make a wider variety of foods available at the household level.
- **Making food itself more nutritious.** Biofortification can enhance specific micronutrient content in crops through plant breeding and improved soil fertility. Significant progress has already been made in integrating biofortification into regional and national policies (Bouis and Saltzman, 2017). Biofortification is intended to substitute consumption of nutrient-poor by nutrient-rich foods. Hence, biofortification must be implemented as part of a wider range of sustainable food-based approaches to nutrition (FAO, 2017).

**FIGURE 1** ➤ FIVE WAYS TO IMPROVE NUTRITION THROUGH AGRICULTURE



SOURCE: adapted from USAID. n.d.

However, while food availability and accessibility are prerequisites for good nutrition, they are not enough to address all forms of malnutrition (Webb *et al.*, 2018). Similarly, assessing access to foods to address dietary needs of local populations and then addressing the drivers of lack of availability and accessibility of certain food groups for local communities can support people's consumption of healthy diets. In this case, the income pathway would come into play. This would also need to address gender inequalities. Both pathways require food and nutrition education if they are to deliver healthy diets.

There are several ways to improve nutrition through agriculture. Work by the Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project, for example, has revealed several opportunities for agriculture to contribute to improved nutrition, especially for those most at risk (Figure 1).

## 2.1 Why extension and advisory services should address nutrition

EAS should address nutrition for a number of reasons.

"Poor diet quality is a contributor to all forms of malnutrition, whether overweight, obesity or undernutrition, including the 'hidden hunger' of micronutrient deficiency. Diet-related non-communicable diseases are now associated with more premature deaths among adults worldwide than any other risk factor" (FAO and WHO, 2017).

EAS directly work with farmers to improve their farm productivity and farm income mainly by supporting application of new knowledge. However, Kachelriess-Matthess *et al.* (2016) note that smallholder farmers are often food insecure and suffer chronic or acute forms of malnutrition which impact on the physical and cognitive growth of children and reduce productivity and the ability of household members to carry out agricultural work. Possible determinants of poor dietary habits

include lack of knowledge and skills, competing personal needs, exposure to unhealthy low-cost and accessible foods enabled by the market environment, lack of access to safe drinking water, and poor handling and storage of foods. Thus, even “when incomes are rising, households might prioritize expenditures that are not relevant to improving nutrition (e.g. communication, mobility)”. Sometimes, prevalent crops are not conducive to nutrition security, or work burdens (especially of women) result in care deficits that could translate into nutrition issues for children.

According to Fanzo *et al.* (2013), “Extension workers are often thought of as the vehicle to the improved nutritional health of rural communities because they reach and interact closely with farmers in different settings. Furthermore, they act as significant service providers of crop, livestock and forestry aspects of food security, consumption and production. It is often thought that service providers within agriculture should focus on aspects of nutrition, and service providers within health should focus on factors around malnutrition.” They further state that “EAS, with their established infrastructure (and because they are the ones who closely work with farmers and have technical agricultural knowledge) can be used to provide a unique opportunity for nutrition interventions to be implemented at scale with significant reach” (Fanzo *et al.*, 2013).

## **2.2 How extension and advisory services can help smallholders improve nutrition**

EAS can help smallholders improve their nutrition through a set of three interventions: promoting healthy diets, diversification of production, and off-farm income-generation for women (Box 2).

### **BOX 2**

### **HOW EXTENSION AND ADVISORY SERVICES HELP SMALLHOLDERS IMPROVE NUTRITION**

#### **PROMOTING HEALTHY DIETS**

Extension and advisory services (EAS) can promote healthy diets through the facilitation of learning activities. The behavioural changes promoted should:

- be adapted to local agroecological characteristics and established dietary patterns;
- focus on diversification of diets (not only staples, but also foods providing other necessary nutrients) and on hygienic practices of food preparation and consumption; and
- promote the consumption of food crops and animal products that are available at farm level to ensure they are used not only as sources of cash but also as food sources.

#### **DIVERSIFICATION OF PRODUCTION**

EAS can promote diversification of production to increase the range of foods available at household level. This can be done through cultivation of nutrient-rich food crops (e.g. leafy vegetables, biofortified crops) and through animal-rearing practices (e.g. poultry, snails, small livestock). While promoting diversification, the following principles must be adhered to:

- Promote the production of food that addresses the dietary deficits of households. Assessing these dietary deficits and their causes is key to selecting appropriate foods and promoting their consumption.
- Do not lose sight of the marketability of food products. Collect and disseminate information on markets and quality requirements.
- Consider the opportunity and challenges to grow food products in the off season of the main crops. The additional income from selling food crops has an income-smoothing effect, especially in regions where rain-fed agriculture predominates.

#### **OFF-FARM INCOME-GENERATION FOR WOMEN**

EAS should identify additional income sources and promote interventions that reduce costs and workloads while increasing revenues. Technical advice is one part of this; another part relates to the business models within which women operate. Supporting women’s empowerment is also required to ensure that they have a say in decisions on how the income is spent etc.

SOURCE: Kachelriess-Matthess *et al.* (2016)

## 2.3 Capacities for nutrition-sensitive extension

In many countries, staff from a wide variety of organizations are involved in addressing nutrition (e.g. departments of health, women and child development, rural development, education etc). Although the primary focus of this guide is on enhancing capacities of extension staff in promoting NSA, we should also look for opportunities to develop these capacities among staff/service providers of other agencies involved in nutrition.

As EAS have become more pluralistic, the actors providing services have become more diversified. According to Fanzo (2015), the capacities that extension agents need to effectively integrate nutrition into EAS include technical knowledge of nutrition; communication, facilitation and management skills; and ability to minimize harm.

### 2.3.1 Technical capacities for promoting nutrition

Extension agents need to be able to promote crop and livestock production practices that have shown potential for improving nutrition, in addition to healthy eating, food preparation, preservation and hygiene practices. Training of extension agents should highlight the role that farmers can play in improving diets and nutrition.

### 2.3.2 Communication, facilitation and management skills

Extension agents require soft skills, such as facilitation, negotiation, communication and gender sensitivity. Farmers will need to be convinced to invest in nutrition for their own families and for the market. Creating demand among farmers will take time.

### 2.3.3 Minimizing harm

Extension service providers need to be sensitized to the fact that promotion of certain practices, technologies and income-generation strategies can have adverse effects on diversity of production, home consumption versus selling and labour, time and energy demands (especially for women) which make nutrition improvements more difficult. Extension agents not only need to be sensitive to unintended harmful consequences but also able to facilitate discussion of these potential trade-offs among the clients they work with. This should include understanding how power dynamics in households and communities can influence outcomes.

## 2.4 Challenges for extension and advisory services in addressing the issue of nutrition

Globally, EAS need to address several challenges faced by farmers.<sup>1</sup> However, this section focuses only on the challenges faced by EAS in addressing the issue of nutrition.

### 2.4.1 Capacity gaps and other barriers at the agent level

Historically the core expertise of public-sector EAS was on increasing production of food crops (mainly cereals) and export crops. Knowledge of and skills in producing crops that could contribute to healthy diets or new enterprises that could improve household nutrition (e.g. advanced, improved and innovative animal husbandry/dairying) are often weak within public-sector EAS.

The private sector, whether input companies or those engaged in agribusiness, is more focused on input and output markets and nutrition is not their focus. Very few NGOs focus on nutrition in agricultural development. In most cases, EAS also lack understanding of the food consumption pattern of their clients.

"The nutrition training of extension agents is often inadequate, particularly in the realm beyond technical agricultural skill. Additionally, a lack of career opportunities and capacity development opportunities discourages EAS agents from engaging with nutrition integration" (Fanzo *et al.*, 2015a).

### 2.4.2 Organizational capacity limitations

Apart from lack of capacities at the individual agent level, several capacity gaps at the organizational level also constrain EAS in addressing nutrition. These include:

<sup>1</sup> Farmers face numerous emerging challenges, including access to better markets, knowledge of new standards and regulations related to input use and certification, addressing issues of deteriorating quality of soil and water, adaptation to climate change, how to encourage their young children to stay in farming, how to become an agripreneur etc. and EAS need to know how to help farmers with all of these.



- **Unclear organizational mandates.** This includes whether addressing nutrition is within the mandate of the organization or whether it is a strategic priority; for example, the main focus of Departments of Agriculture may be on distribution of subsidies to meet targets, with education activities taking a back seat. Lack of an explicit focus on nutrition results in poor design, monitoring and implementation of nutrition interventions. In most cases, promoting NSA is not even a part of job description of staff.
- **Shortage of staff.** This is a major constraint of public-sector EAS in most developing countries, and often leads to poor implementation of extension interventions, including those addressing nutrition. Shortage of female staff exacerbates this constraint.
- **Lack of travel support.** Inadequate travel budget and lack of vehicles to reach communities living in distant or inaccessible areas (who may be the most nutritionally vulnerable) often limit the ability of EAS personnel to organize any type of intervention to address nutrition in such places.
- **Lack of information, education and communication materials.** Without materials that aid learning, it is difficult to bring about behavioural change, especially on topics such as nutrition.
- **Ineffective partnerships.** FAO (2015b) noted that the "impact on nutritional status cannot necessarily be achieved by food and agriculture programmes alone. Access to health, water and sanitation, education and social-protection programmes are usually required. It is therefore important to seek synergies with operations from other sectors, for example by targeting the same areas, or harmonizing activities such as purchasing from local farmers to supply local school canteens, school feeding/midday meal programmes."

Many organizations lack capacities to engage in joint/collaborative action with other agencies working in the area of nutrition. For instance, EAS would be better able to address the issue of undernutrition if, for instance, the Department of Agriculture could collaborate easily with the agencies involved in health, nutrition, women and child development as well as education. "Systematic reviews indicate that cross-sector approaches requiring collaboration among and across a range of stakeholders can lead to better nutrition and health outcomes" (USAID and SPRING, 2016).

But to do this, EAS would have to know the role of other organizations and programmes addressing nutrition in the country and work out how it could add value to some of these initiatives. For instance, EAS could organize a workshop for community health workers to

strengthen their understanding of the importance of growing nutritious crops to improve diets so that they too could advise their clients on this topic. EAS could also work with schools to promote food gardens in schools and also to promote healthy diets. In most cases, the department dealing with women and child development may have its own centres at the village level, which could be used by EAS to organize programmes on NSA. EAS should thus make use of such centres and platforms of other organizations that can attract the relevant participants for promoting NSA.

EAS providers should also know the key terms that are commonly used in the area of nutrition. These are defined in Box 3.

#### 2.4.3 Capacity constraints at the enabling-environment level

Food and agriculture policies and programmes have a major influence on nutritional outcomes (UNSCN, 2014). The ability of EAS to address nutrition is, to a large extent, dependent on how nutrition is prioritized at the national level by the government and also whether it is considered important by EAS as an area for intervention. For instance, the presence of some of these aspects will better enable the EAS ability to address nutrition:

- having a country-level nutrition policy or strategy and an aligned action plan with explicit indicators;
- agricultural interventions are considered as a means to address nutrition;
- country-level agricultural policy recognizes the role of EAS in addressing nutrition;
- having an extension policy and addressing nutrition is considered as a priority for EAS;
- nutrition is part of the education and training curricula of extension agents;
- coordination mechanisms exist to facilitate interactions between EAS and other nutrition actors.

#### BOX 3 ➤ COMMON TERMS USED IN NUTRITION

**Malnutrition.** An abnormal physiological condition caused by inadequate, unbalanced or excessive consumption of macronutrients and/or micronutrients. Malnutrition includes undernutrition (wasting, stunting, underweight) and overnutrition (overweight, obesity) as well as micronutrient deficiencies (FAO *et al.*, 2019).

**Micronutrients.** Essential vitamins, minerals and trace elements required in minuscule amounts by the body throughout the lifecycle.

**Nutrition-specific interventions** or programmes are those that address the immediate determinants of foetal and child nutrition and development – adequate food and nutrient intake; feeding, caregiving and parenting practices; and low burden of infectious diseases.

**Nutrition-sensitive interventions** or programmes are those that address the underlying determinants of foetal and child nutrition and development – food security; adequate caregiving resources at maternal, household and community levels; and access to health services and a safe and hygienic environment – and incorporate specific nutrition goals and actions (Ruel and Alderman, 2013).

**Dietary diversity** is a qualitative measure of food consumption that reflects household access to a variety of foods and is also a proxy for nutrient adequacy of the diet of individuals.

**Dietary Diversity Score (DDS)** can be scored on a household or individual basis. Household dietary diversity is defined as the number of unique food groups consumed by household members over a given period.

**Biofortification** is a process to increase the bioavailability and the concentration of nutrients in crops through both conventional plant breeding and recombinant DNA technology/genetic engineering.

SOURCE: the authors

## ► 3 LEARNING NEEDS ASSESSMENT: A REVIEW

According to CPD (2016), a learning need is a gap between current practices and desired practices. Learning needs assessments are tools that are used to measure the gap between current and desired practice. They do so by asking key questions.

- How big is the gap?
- Is it known or unknown to the target audience?
- What current practices or issues are pressing on this issue for the target audience?
- Is there motivation to learn something new and if not, what action should be taken provide such motivation?

### 3.1 Learning needs or capacity needs

FAO (2020a) notes that “when starting to plan a learning initiative, you need to confirm that learning is an appropriate solution to address the identified capacity issue. Indeed, not all capacity problems are related to insufficient individual knowledge, skills or competencies. A capacity assessment can help scope the nature of the capacity issues and identify whether learning can contribute to addressing the situation.”

### 3.2 Organizing learning needs assessment

According to FAO (2020a), “Once the need for learning support has been established, a learning needs assessment must be conducted. This should include an analysis of the work setting or the organizational context in which individuals operate. This is fundamental to assess the extent to which learners will be able to implement the results of the learning in their workplace. It also helps to guide learning managers on possible complementary activities, other than learning, that might be required to achieve more effective and sustainable results.” It further states that “Paying attention to the organizational context as part of a learning needs assessment helps to gear the contents of the initiative to the participant and to organizational needs. This is important to ensure that the newly acquired learning will be translated into practice and “transferred” sustainably to the workplace, with positive impact on overall organizational capacity” (FAO, 2020a).

A learning needs assessment can be conducted in several ways, depending on the time frame, the budget available and the size of the learning initiative. These include:

- questionnaires
- key informant interviews
- focus groups
- online surveys
- review of previous reports on programme evaluation or capacity assessments

#### BOX 4

#### ADVANTAGES OF LEARNING NEEDS ASSESSMENT

A learning needs assessment is useful for:

- analysing the specific learning needs of individuals identified and the context in which they operate;
- understanding possible follow-up actions that could help to maximize the implementation of learning and its transfer to the organizational context; and
- understanding additional/complementary activities (other than learning) required to address the capacity needs sustainably.

SOURCE: FAO (2020a)

- observation
- self-assessment
- performance assessment
- assessment of strengths, weaknesses, opportunities and threats
- stakeholder analysis.

### 3.2.1 UNDP Capacity Assessment Framework

The United Nations Development Programme (UNDP, 2008) has developed a capacity assessment framework that has three dimensions: points of entry; core issues; and functional and technical capacities.

- **Points of entry.** Capacity resides at three levels, viz., the enabling environment, organizational and individual. Each of these can be the point of entry for a capacity assessment. Depending on the context, capacity resides at one of three levels:

- **Individual.** This refers to attitudes and behaviours of individuals and relates to knowledge and skills that maximize the benefits of participation, knowledge exchange and ownership.
- **Institutional.** Focuses on the overall organizational performance and functioning capabilities, as well as the ability of an organization to adapt to change.
- **Systemic.** Emphasizes the overall policy framework in which individuals and organizations operate and interact with the external environment.

- **Core issues.** UNDP (2008) identifies four core capacity issues: institutional arrangements, leadership, knowledge and accountability.

- **Functional and technical capacities.** Functional capacities are needed to create, manage and review policies, legislation, strategies and programmes across levels of capacity (enabling environment, organizational, individual) and core issues (institutional arrangements, leadership, knowledge, accountability). The five functional capacities are:

- capacity to engage stakeholders;
- capacity to assess a situation and define a vision and mandate;
- capacity to formulate policies and strategies;
- capacity to budget, manage and implement; and
- capacity to evaluate.

Technical capacities are those associated with particular areas of expertise and practice in specific sectors or themes, such as climate change, nutrition, agriculture, HIV/AIDS, legal empowerment or elections.

### 3.2.2 FAO Capacity Assessment Framework

The FAO Capacity Assessment Framework (FAO, 2012) attempts to assess three dimensions of capacity in four functional capacity areas (column 1 and 2 of Table 1) through a series of sector-specific questions. For example, if the assessment concerns policy and normative capacity, the questions seek to broadly identify the existing legal and regulatory framework related to the sector under assessment. The questions should also help to understand how these laws are implemented in practice, such as the internal capacity of regulatory agencies in terms of mandates, strategies, intersectoral collaboration, processes and systems, human and financial resources, knowledge and information management, skill levels and learning needs.

The assessment process focuses on dialogue and collection and analysis of qualitative information related to major issues, perceptions and suggestions of various stakeholders on the dimensions (enabling environment, organizations, individuals) and capacity areas. The questions can be summarized in the form of a matrix (Table 1), which can be used for bringing together the assessment results.

**TABLE 1** A SUMMARY OF THE FAO CAPACITY ASSESSMENT MATRIX

Dimensions	Capacity areas	Existing situation	Desired situation	Capacity development need	Suggested interventions	Responsible actors	Priority 1 - Urgent 2 - Medium term 3 - Long term 4 - Not a priority
Enabling environment	Policy and legal frameworks						
	Economic framework and national public-sector budget allocations						
Organization	Institutional motivation						
	Operational capacity						
Individual	Skills levels						
	Competency development						

SOURCE: the authors

- The first and second column show the dimensions and the selected capacity areas under assessment.
- The third column provides a snapshot of the existing situation and lists the main findings generated by the context analysis and the key informant/group interviews.
- The fourth column includes the suggestions of national stakeholders on where they wish to be in the medium term.
- The fifth column compares the present with the future situation and identifies the needs.
- The last three columns are for listing suggested interventions and responsible actors and to assign priorities to the future interventions for each capacity area.

## ► 4 OPERATIONALIZING GLOBAL CAPACITY NEEDS ASSESSMENT

The review of learning needs assessment and capacity assessment in section 3 clearly indicates the need to broaden the scope of this tool from a learning needs assessment that focuses on the individual and organizational level to a capacity needs assessment that also includes an analysis of the enabling environment. The steps in such an assessment process are indicated in Table 2.

Operationalizing this tool in the context of integrating nutrition objectives into agricultural/EAS programmes and policies calls for a capacity needs assessment (CNA) approach. CNA is a capacity-strengthening process in its own right, and this process is as important as the outcomes.

The FAO Corporate Strategy on Capacity Development (2010) envisages exploring capacities across three levels – individual, organizational and enabling environment – and GCNA focuses on these three levels.

**TABLE 2 ► STEPS IN THE CAPACITY ASSESSMENT PROCESS**

Steps	Tool/approach for data collection	Information to be collected
Inception workshop	Presentation on the proposed study Open discussion Group discussion	Key initiatives in the area Key contacts in the different organizations that can provide more information for the study Key documents to be reviewed for the study
Nutrition and policy context mapping	Literature review Key informant interviews	Nature of the problem in the country Data on undernutrition including trends and variations across provinces Government policies and schemes addressing nutrition by agencies belonging to different sectors; and Policies and programmes promoting NSA
Stakeholder mapping		Identification of organizations involved in promoting nutrition and NSA Understanding the key roles they perform, the regions they operate and their means of engagement
Organizational capacity assessment	Literature review Key informant interviews Focus-group discussions	Organizational mandate related to NSA Capacity-development initiatives in the sector Investments on promoting NSA Human resources deployed by EAS agencies in promoting nutrition by agricultural and allied sectors and others outside Challenges in promoting NSA Partnerships in promoting NSA
Individual capacity assessment		Technical capacity gaps and functional capacity gaps in promoting NSA among field-, middle- and senior-level personnel
Synthesis of results		
Validation workshop	Presentation of initial findings to select stakeholders	Validation on the findings Suggestions for improving the methodology adopted
Final report		

NSA Nutrition-Sensitive Agriculture

## **4.1 Enabling-environment level**

The first step in the GCNA process is to organize an inception workshop at the national level with 15–20 participants, including key officials in the ministries and government departments involved in agriculture, women and child development, health, nutrition and education as well as representatives of NGOs and private sector who are involved in addressing malnutrition in various ways.

### **4.1.1 Step 1. Inception workshop**

The purposes of the inception workshop are to:

- familiarize the participants about the proposed assessment and get their feedback on the proposed methodology and
- help achieve ownership of the process and seek their help in contacting the right organizations and key contacts during the assessment process.

In this workshop, the assessment team leader will present the rationale for undertaking the assessment and the proposed methodology. This will be followed up by a question and answer/feedback session. As the main purpose of this workshop is to get feedback and a list of relevant organizations, documents and contacts, the post-presentation sessions could be organized as group sessions addressing the following questions:

- What are the key challenges in integrating agriculture into nutrition interventions (policy, organizational and individual levels)?
- Which are the key organizations involved in promoting agriculture and nutrition in the country and what roles are they playing? Whom should the project approach for more information (key contacts)?
- Which EAS providers are promoting NSA? What capacities may have to be strengthened, and how can this best be done? What capacities are missing in extension and advisory services to promote NSA and how could these be strengthened?
- How could the GCNA methodology be implemented in the most effective way?

This would then be followed by a plenary session at which groups would report back.

### **4.1.2 Step 2. Context mapping**

#### **NUTRITION CONTEXT**

The second step is to understand the context of nutrition or the problem at hand with respect to nutrition.

Suggested questions include the following:

- Is stunting, wasting, micronutrient deficiency, overweight or obesity an issue among large sections of the population?
- Is there more than one of these prevalent in the community of interest?
- Are there analyses on the underlying causes of malnutrition in the country, in particular those that identify causes that could be addressed by agriculture extensionists?

For instance, in the United States of America, obesity is an important nutritional challenge and the National Institute of Food and Agriculture implements obesity prevention and healthy weight programmes through its partners in the land-grant university system.

The obesity prevention projects include identifying nutritional needs; developing new foods to help achieve caloric balance; providing nutrition education; conducting behavioural research; and planning, conducting and evaluating dietary interventions (USDA, n.d.).

In Malawi, food and nutrition interventions revolve around addressing the high prevalence of infections, such as HIV and tuberculosis. The Government of Malawi recognizes the important role that food and nutrition interventions play in the care and treatment of these diseases and is therefore committed to delivering effective food and nutrition interventions (MoH, 2017).

Stunting, iodine deficiency and maternal and child anaemia represent the largest burden of

undernutrition in Tajikistan (World Bank, 2012).

It is also necessary to understand the underlying causes of malnutrition.

- Is it a seasonal issue depending on lack of employment and income during certain months?
- Which regions or states have high levels of undernutrition, micronutrient deficiencies, overweight or obesity?
- Which groups are most at risk and what are the reasons for this?

For instance, in Bangladesh, Monga or seasonal food insecurity is very common as employment and income opportunities of the rural poor strongly decrease between transplantation and harvest of paddy. The lack of income reduces people's ability to meet their nutritional requirements (Zug, 2006). In India, Bihar, Jharkhand, Madhya Pradesh, Rajasthan and Uttar Pradesh have persistent high stunting rates (Ramani, 2019).

For national-level information, find out if the country has recently developed or revised their food-based dietary guidelines (FAO, 2020b) as these include analyses of the underlying causes of malnutrition, what constitutes a healthy diet at national level, as well as materials to promote healthy diets for different audiences. In addition, the Global Nutrition Report Country Profiles (Global Nutrition Report, 2020) can provide an overview of the national nutrition situation.

For subnational data on the nutrition status and risk of food insecurity, see:

- World Health Organization Global Database on Child Growth and Malnutrition
- Global Database on Body Mass Index
- The Famine Early Warning Systems Network.

#### POLICY CONTEXT

The purpose of this exercise is to understand how the issue of nutrition is articulated in the policy space. Suggested questions include the following:

- Does the national development plan include nutritional goals/objectives?
- Are there programmes in place that have a major role to play in improving a country's nutritional outcomes?
- Is there a national nutrition strategy and an aligned action plan with explicit indicators?
- Does the country have food and agriculture policies and is addressing nutrition articulated in them?

Example of policies to review are given in Box 5.

#### BOX 5 TYPES OF POLICIES AND PROGRAMMES INFLUENCING NUTRITION AND SUPPORTING HEALTHY DIETS

- Health policies and priorities
- Agriculture and food-security policies
- Environmental policies
- Education policies
- Social-protection policies, including welfare
- Gender-equality policies and strategies
- Development, women's development and population policies
- Other policies related to food supplies and nutrition
- Macroeconomic policies, for example relating to exchange rates, wages, prices and foreign trade

SOURCE: FAO (2019).

**TABLE 3** POLICIES RELATED TO AGRICULTURE AND NUTRITION FROM DIFFERENT COUNTRIES

Policy	Excerpts from the policy
National Nutrition Policy 1993 (India)	<ul style="list-style-type: none"> <li>Improving the dietary pattern. The dietary pattern of the people should be improved by promoting the production and increasing the per capita availability of nutritionally rich foods. Provision of nutritionally rich foods at affordable cost. Production of pulses, oilseeds and other food crops will be increased. The production of protective food crops, such as vegetables, fruits, milk, meat, fish and poultry shall be augmented. Preference shall be given to green leafy vegetables and fruits such as guava, papaya and amla with the help of latest and improved techniques.</li> </ul>
	SOURCE: Francis (n.d.)
National Multi-Sector Nutrition Policy (Malawi) 2018–2022	<ul style="list-style-type: none"> <li>Promote fortification and standardization of centrally processed food for improved nutrition.</li> </ul>
	SOURCE: Government of Malawi (2018)
The National Agriculture Policy (Malawi)	<ul style="list-style-type: none"> <li>Promote production and utilization of diverse nutritious foods in line with the National Nutrition Policy and Strategic Plan.</li> <li>Foster adequate market supply and access of diverse and nutritious foods.</li> <li>Ensure food safety for all.</li> <li>Promote private-sector investments in production, processing and marketing of high-quality nutritious foods, including complementary foods.</li> <li>Coordinate investments and subsectoral policies and strategies that help improve the nation's nutritional status and promote healthy diets.</li> <li>Promote biofortification and fortification of major food staples.</li> <li>Promote food and nutrition education for all.</li> </ul>
	SOURCE: MoAFS (2010)
National Policy on Food and Nutrition Security (South Africa)	<ul style="list-style-type: none"> <li>The availability of improved nutritional safety nets, including government-run and -supported nutrition and feeding programmes, emergency food relief, as well as interventions by private sector, community-based organizations and NGOs.</li> <li>Improved nutrition education, including district-level nutrition services to assist households and communities monitoring nutritional indices, providing consumer literacy and assisting with better food management and improved meal planning.</li> <li>Food and nutrition security risk management, including increased investment in research and technology to respond to the production challenges currently facing the country, such as climate change and bioenergy. It would also include the protection of prime agricultural land, and limitations on its alienation for other activities, including mining, game farming and property development.</li> <li>Improved food-security information management systems would also be required, with periodic scientific reviews of the state of food security in the country.</li> </ul>
	SOURCE: DSD/DAFF (2013)

Table 3 presents some examples of policies related to agriculture and nutrition in India, Malawi and South Africa.

**APPROACH/TOOL.** A review of literature (web search) and document review. Find out if the country has recently conducted a policy review for nutrition for another purpose. In some countries, where many of these documents are not available online, visit ministries involved in planning, agriculture, health, nutrition etc. to collect key documents.

**EXPECTED OUTPUT.** This step can provide background information on the nature of the problem at the national level and the policies and programmes within the food, agriculture and nutrition sector being implemented to address them. It can also provide information on the nature of investments being made and an initial list of organizations/stakeholders involved in addressing nutrition. Subnational-level information is critical to address issues in the local communities served by rural advisory services<sup>2</sup>.

#### 4.1.3 Step 3. Stakeholder mapping

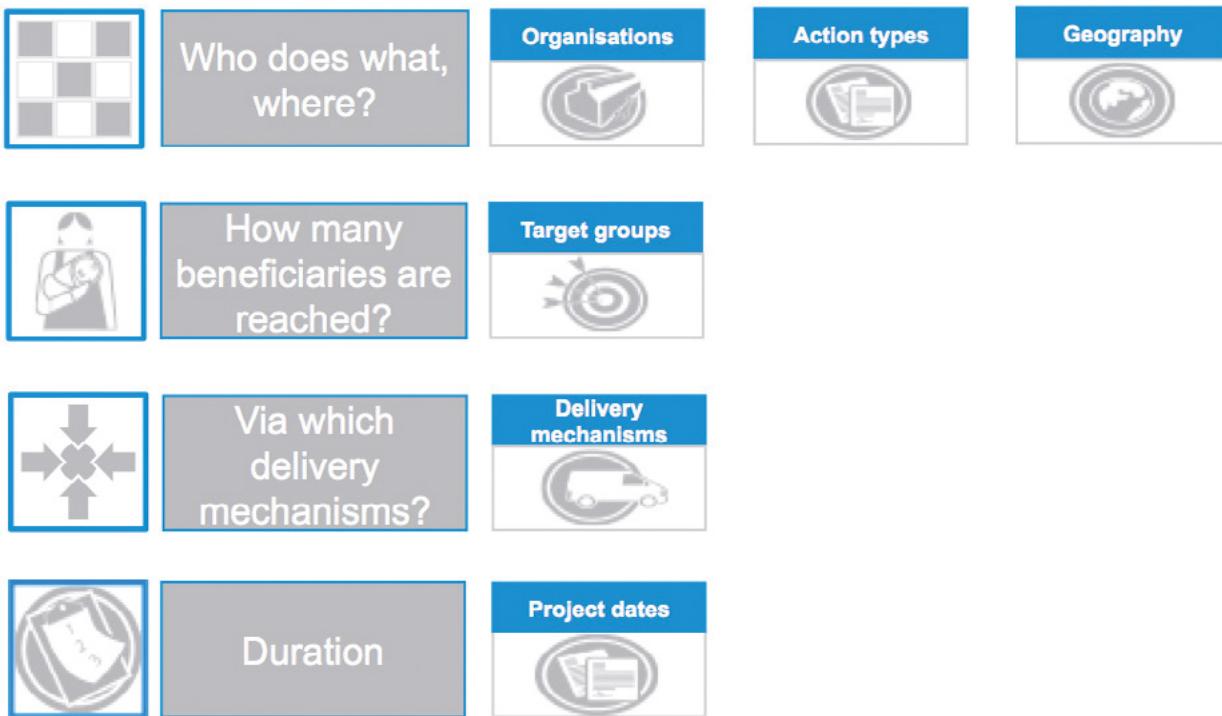
Before conducting a nutrition stakeholder mapping exercise, check if the government or other organizations have not recently conducted one. Such a mapping exercise might have been undertaken if the country is a Scaling Up Nutrition (SUN) Country, such as Mali (SUN, 2018). This step identifies the various stakeholders engaged directly and indirectly in addressing nutrition, the type of clients they serve etc. Several organizations may be involved in addressing nutrition. Apart from those agencies having a direct mandate on nutrition, these might include agencies involved in public health, women and child development, agriculture and education. Each of these organizations approaches nutrition from its own perspective and each works with specific clients. Understanding the role played by the different organizations is important to strengthen collaborative action by EAS in addressing nutrition.

Figure 2 illustrates the guiding questions for undertaking this stakeholder analysis.

The data collected could be presented as in Table 4.

It would be also useful to provide a separate table on the EAS providers from both the agricultural and allied sectors and also from other sectors working with communities to promote nutrition (Table 5).

**FIGURE 2** ➤ FOCUS OF STAKEHOLDER AND ACTION MAPPING



SOURCE: UNICEF (2018)

<sup>2</sup> Nutrition issues may differ markedly in different parts of the country.

**TABLE 4** ACTORS INVOLVED IN NUTRITION AND NUTRITION-SENSITIVE AGRICULTURE (PERFORMING KEY EXTENSION AND ADVISORY SERVICE ROLES)

No	Actors involved in nutrition	Key nutrition-related roles performed	Geographical focus (all over the country/specific regions [name these] or only at the regional, district level etc.)	Type of clients served (e.g. all, pregnant/lactating women, infants/ young children (less than 5 years old?), those having ailments/or sick, school children etc.)	Delivery mechanisms used (health centres, hospitals, schools, women and child development centres, NGOs, community health workers, agricultural extension agents, media/ICTs)

ICT Information and Communication Technology

**TABLE 5** EXTENSION AND ADVISORY SERVICE STAKEHOLDERS WHO ARE PLAYING AND CAN PLAY A ROLE IN PROMOTING NUTRITION-SENSITIVE AGRICULTURE

Category	Sector	EAS providers	Roles played in promoting NSA	Potential roles that could be played for promoting NSA
1	Agricultural and allied sectors			
a				
b				
c				
2	Other sectors			
a				
b				
c				

EAS Extension and Advisory Services - NSA Nutrition-Sensitive Agriculture

**BOX 6 TIPS FOR CONDUCTING KEY INFORMANT INTERVIEWS**

- Include all major stakeholders/actors so that divergent interests and perceptions can be captured.
- Ask key informants for contact details of key people representing other organizations.
- Ask key informants for published materials and links to publications about their interventions in nutrition.

SOURCE: the authors

Information related to some of these might be available from reports of similar assessments of the nutrition sector undertaken previously (research papers, review reports etc.) but interviews with key informants (Box 6) are essential to get up-to-date and detailed information. Such interviews also provide opportunities to collect additional information and will also help to identify some of the participants for the proposed (end of the assessment) workshop.

**APPROACH/TOOL.** Review of literature and key informant interviews.

**EXPECTED OUTPUT.** This scoping exercise gives an indication of the range of actors engaged in the field of nutrition and the different roles they perform. This helps in identifying organizations and also some people within these organizations who could be interviewed subsequently to understand organizational and individual capacity gaps.

## 4.2 Organizational level

### 4.2.1 Step 4. Organizational capacity assessment

From the information available through stakeholder mapping (step 2), select organizations that are most relevant for organizational capacity assessment. Preference should be given to organizations engaged in EAS undertaking nutritional interventions and those outside EAS where there is a potential for collaboration to promote NSA.

For instance, community health workers (often associated with the Ministry of Health) could be a partner for EAS to promote NSA among clients they reach. Perhaps they only need training on how to promote improved nutrition through cultivating nutritious crops for consumption. Similarly, EAS staff could support teachers who are taking a lead in establishing nutrition gardens in schools (Shafer, 2018). In India, many schools have nutrition gardens and the Ministry of Human Resource Development has recently drawn up guidelines to provide funding support to further expand and strengthen school gardens (Shukla, 2019).

Ethiopia provides another example that reveals the importance of collaboration. Here, Development Alternatives Incorporated (DAI) established more than 500 community and school vegetable gardens in 20 cities and towns across six provinces. The main objectives of the project were to improve nutrition and food security and to provide income opportunities for vulnerable households. DAI trains agriculture extension agents in nutrition and HIV, and similarly, trains health extension agents in agriculture (Fanzo *et al.*, 2013).

EAS could support schools in selection of appropriate crops/varieties and promote scientific crop management practices among students and teachers. To do this formally, as a collaborative activity, EAS should work with the Department of Education through an agreement or memorandum of understanding as the schools are regulated by the Department of Education.

The organizational capacity assessment should explore the existing nature (or lack) of collaboration between different agencies, the challenges and opportunities for collaboration and what needs to be done to further strengthen and expand such initiatives. The following sections address key areas that need to be looked into and suggest possible questions to ask.

#### ORGANIZATIONAL MANDATE WITH RESPECT TO NUTRITION

- Is nutrition part of your core mandate?
- Is this reflected in the vision, mission, objectives or functions of your organization?
- If yes, at what level it is stated and how?

**PROGRAMMES ADDRESSING NUTRITION**

- What programmes do you implement that promote nutrition?
- Do you have adequate capacity-development activities to enable EAS actors to successfully implement these programmes?

EAS actors commonly have programmes aimed at increasing food production that indirectly contribute to nutrition security. The focus of this assessment should be on programmes that have more direct impact on nutrition, such as those listed in Table 6.

**TABLE 6 ➤ SPECIFIC PROGRAMMES ON NUTRITION**

Nature of programmes	Type/category of clients served	Number of such interventions in a year and reach (number of clients directly reached)	Partners in these interventions	Capacity-development activities for EAS to implement these programmes
Advise rural communities on importance of dietary diversity				
Nutrition training (organize lecture/classes on nutrition from different food sources) as part of a specific programme (with expected nutrition outcomes)				
Nutrition education (formal certificate/diploma/degree), for instance, as part of the university academic programme (Note: state agricultural/rural universities are also an EAS actor)				
Promotion of kitchen gardens				
Promotion of school gardens				
Distribution of seeds/seedlings/planting material of fruits/vegetables etc. material of fruits/vegetables etc.				
Organize women farmers to help them with production/marketing/value addition				
Promote diversification of crops				
Organize food distribution				
Conduct research on nutrition				
Promote value addition of food				
Develop/promote biofortification				
Promote cooking methods that preserve nutrients in fruits and vegetables				
Provide supplementary feeding programme to the needy				
Organize school feeding programmes				
Other interventions a. b. c.				

SOURCE: the authors

#### **FINANCIAL INVESTMENTS FOR ADDRESSING NUTRITION AND NUTRITION-SENSITIVE AGRICULTURE**

- How much (USD/year equivalent) does your organization invest in nutrition programmes every year?
  - Exact allocation
  - Allocation as a percentage of total budget of the organization
  - Are the resources adequate to meet your nutrition mandate? (In other words, are limited finances adversely affecting your interventions? If so how?) (Information could be collated in a table such as Table 7)
  - What resources are needed to further strengthen your nutrition interventions and what activities could these additional resources be spent on?

#### **HUMAN RESOURCES DEPLOYED IN NUTRITIONAL INTERVENTIONS**

Information on human resources deployed in nutritional interventions can be presented in a table such as Table 8. This information could be collected from annual reports (if this is indicated separately) or through interviews with the key official in the organization.

**TABLE 7** KEY ISSUES RELATED TO FINANCING NUTRITION [TICK (✓) THE APPROPRIATE RESPONSE]

Key issues related to financing nutrition interventions	Response rating			
	Inadequate	Adequate	More than adequate	Don't know
Quantum of funds				
Is the funding for nutrition interventions in your organization adequate?				
Access at the right time	Not available	Seldom available	Always available	Don't know
Are the funds available when needed to organize nutrition interventions (operational funds)?				
Sustainability of funding	Highly fluctuating and unreliable	Not much fluctuation every year	On an increasing trend	On a decreasing trend
Is the funding regular without too much fluctuation over the years?				

SOURCE: the authors

**TABLE 8** HUMAN RESOURCES DEPLOYED IN NUTRITION PROGRAMMES

Type/category of staff/level	Role	Number of staff	% of female staff	Jurisdiction/area coverage

SOURCE: the authors



## CONSTRAINTS IN PROGRAMME DELIVERY

- Staff adequacy:
  - Do you have enough staff who can effectively design/implement/supervise your nutritional interventions?
  - If not, what additional staff does your organization need, and at which level?)
- Staff capacity development <sup>3</sup>
  - Do the staff have adequate technical capacities to carry out the requested programmes?
  - Do the staff have adequate functional capacities for delivering nutrition programmes (soft skills such as facilitation and negotiation skills)?

In this section, the main focus is on the following questions:

- Who trains the staff on addressing nutrition?
- How often are they trained, and how many are trained?
- Do you conduct induction training for your staff and is nutrition included in induction training?
- Do you think that the training institutions have enough resource persons who can organize quality training on nutrition aspects?
- Are the staff satisfied with the trainings on nutrition? What are the limitations, if any?
- Is there a training module on NSA that is used for staff training?
- Do the capacity-development programmes give the EAS the skills they need to implement the programmes they are tasked to implement?

## OPERATIONAL SUPPORT FOR IMPLEMENTING NUTRITION PROGRAMMES

- Mobility
  - Does the organization have enough vehicles for staff travel to organize programmes?
  - Is there a mechanism for hiring vehicles for travel?
  - Do field staff have motorcycles and are fuel allowances paid to cover their field travel costs?
- Information, communication and education materials
  - Has the organization developed learning materials that could be used to implement the nutrition programmes?
  - If yes, what information, communication and education (ICE) materials exist and are used by the staff?
  - How does the organization provide ICE materials to support staff for use in the field?

Present information collected in a table like Table 9.

<sup>3</sup> This is explored in more detail when assessing capacities at the individual level.

**TABLE 9** ➤ FREQUENCY OF USE OF INFORMATION, COMMUNICATION AND EDUCATIONAL MATERIALS

ICE materials	Frequency of use				Reasons for no or limited use
	Always	Often	Rarely	Never	
<b>PRINTED MATERIALS</b>					
Brochures (including leaflets/pamphlets)					
Posters					
Wall calendars					
Billboards					
Advertisements (posted on public transport vehicles, for example)					
Flip charts					
Others					
<b>MASS MEDIA</b>					
Audio clips					
Video clips					
Mini-drama					
Television					
Radio					
Newspapers					
Magazines					
<b>GIVEAWAYS (SUCH AS SEEDS/PLANTING MATERIALS)</b>					
Others					

SOURCE: the authors

**BUILDING EFFECTIVE PARTNERSHIPS**

The purpose of this exercise is to find out the following:

- Is the organization working with other organizations in promoting nutrition?
- If so which organizations and what is the purpose of collaboration?
- If not, why not?
- What needs to change to develop new partners/improve existing partnerships?

Present the information gathered in a table such as Table 10.

**TABLE 10** NATURE OF COLLABORATION FOR IMPLEMENTING NUTRITION

No.	Organization	Name of partner organization	Purpose of partnership	Challenges in partnership
1		1		
		2		
		3		
2				

SOURCE: the authors

**BOX 7** TIPS FOR CONDUCTING KEY INFORMANT INTERVIEWS

- When selecting the key informants, to the extent possible, remember to select staff from different levels: senior and middle managers, field workers, female workers.
- It is also key to ensure that the managers and all staff involved understand the purpose of the assessment, the way it is conducted, and respect its confidentiality.
- For instance, if the managers/staff do not understand the purpose of the assessment, they may see it as an externally imposed audit/test and be reluctant to provide true information about finances and achievements and failures of the organization. Similarly, lower level staff may fear consequences (e.g. losing the job) of responding frankly about their capacities, motivation and working conditions. Hence, it is highly advisable to present and discuss the assessment with the managers and staff (e.g. through an information meeting).

SOURCE: the authors

**APPROACH/TOOLS.** Key informant interviews.

Tips for conducting key informant interviews are presented in Box 7.

**EXPECTED OUTPUT.** This exercise identifies the organizational features of agencies involved in extension in the field of agriculture and nutrition especially with respect to mandate (to address nutrition), resources deployed (both financial and human) in addressing the mandate, the nature of programmes it implements, the use of ICTs, staff capacities, capacity-development measures and partnerships they forge with others. It thus provides a good picture of the existing organizational capacities and how these could be enhanced.

### 4.3 Individual level

This section is about understanding capacities in EAS and other actors addressing nutrition or promoting NSA. This includes both existing capacities that need strengthening and new capacities that need to be developed.

#### 4.3.1 Step 5. Individual capacity assessment

Individual agents providing advisory support need both technical and functional skills related to promoting nutrition. However, this is widely reported to be weak. According to Fanzo *et al.* (2013) "Nutrition training provided to EAS agents at agricultural schools and universities is widely believed to be ineffective and inadequate. There is insufficient training in basic nutrition concepts and skills, including the causes of and possible solutions to malnutrition, anti-nutrients and food safety, nutritional assessment understanding of the local nutrition context, needs assessment, how to raise awareness of nutrition as a priority, and behaviour-change communication. Facilitation and negotiation skills are required for extension agents who move into nutrition. Farmers will need to be convinced to invest in nutrition for their own families and for the market." Davis *et al.* (2017) have identified some of the specific competencies needed by EAS providers in addressing nutrition (Table 11).

**TABLE 11** NUTRITION-FOCUSED COMPETENCIES FOR EXTENSION AND ADVISORY SERVICES

Competency domains	Description of specific competencies within the domain
<b>Importance of nutrition</b>	<ul style="list-style-type: none"> <li>Is convinced that nutrition is important, and motivated to take action at personal, family/community and professional levels (attitude/perspective)</li> </ul>
<b>Production diversity (economically and agroecologically appropriate)</b>	<ul style="list-style-type: none"> <li>Can identify context-appropriate trees, crops and livestock that can meet nutrition needs of specific/targeted communities and households</li> <li>Can provide examples of farm products (including cultivated and wild plants, animal-source foods and fish) that contribute to improved dietary diversity and are appropriate for the market context</li> </ul>
<b>Diversity of diets (from both household production and market access)</b>	<ul style="list-style-type: none"> <li>Can identify why a diversity of foods contribute to health and nutrition and promote their uptake</li> <li>Can communicate the nutritional value of foods and food groups and what constitutes a healthy diet in their context</li> </ul>
<b>Year-round access to diverse, nutritious foods</b>	<ul style="list-style-type: none"> <li>Understands the relationship between seasonal food availability and fluctuations in income, food and nutrition security and health</li> <li>Can engage communities in planning for better access to foods that contribute to healthy diets</li> </ul>
<b>Nutrition for all</b>	<ul style="list-style-type: none"> <li>Is sensitized to people's different nutrition needs, determined by sex, age, activity level, health status, pregnancy and lactation</li> <li>Is able to identify and address the needs of the most nutritionally vulnerable</li> </ul>
<b>Nutrition-friendly agricultural practices</b>	<ul style="list-style-type: none"> <li>Can identify and promote practices that improve soil health, such as intercropping, crop rotation, applying organic materials and limited tillage methods</li> </ul>
<b>Responsible agrochemical use</b>	<ul style="list-style-type: none"> <li>Knowledge of integrated pest management options – understands there can be a range of (sometimes non-chemical) options to control any given pest</li> <li>Recommends improvements in product choice, agrochemical preparation and application practices, timing of application and consumption of treated produce</li> </ul>
<b>Gender-responsive agricultural labour practices</b>	<ul style="list-style-type: none"> <li>Identifies the health- and nutrition-related problems that result from inappropriate labour practices for perinatal and lactating women</li> <li>Can promote alternative activities and practices based on biological limitations and gender-related tasks</li> </ul>
<b>Reducing post-harvest losses for home consumption and for markets</b>	<ul style="list-style-type: none"> <li>Describes the basic causes of post-harvest losses during harvest, storage and preparation at home</li> <li>Lists, understands, describes and discusses simple, low-cost techniques/technologies that minimize post-harvest losses</li> <li>Analyses and evaluates techniques/technologies that are more appropriate for minimizing post-harvest losses at home</li> <li>Applies techniques/technologies that minimize post-harvest losses and maximize storability of foods</li> </ul>
<b>Better agricultural practices for better water, sanitation and hygiene</b>	<ul style="list-style-type: none"> <li>Makes people aware of the importance of adopting agricultural practices that reduce the risk of infection</li> </ul>
<b>Hygiene in food preparation, caregiving</b>	<ul style="list-style-type: none"> <li>Reinforces essential hygiene actions, paying particular attention to interactions between agriculture, hygiene and health and nutrition</li> </ul>
<b>Irrigation and multiple use water services</b>	<ul style="list-style-type: none"> <li>Recognizes the importance of access to safe, accessible and adequate water for both domestic and agricultural purposes</li> <li>Is able to help reduce the risk of vector-borne and faecal-oral diseases and illnesses resulting from certain irrigation practices</li> </ul>
<b>Livestock management, clean water, sanitation and hygiene</b>	<ul style="list-style-type: none"> <li>Communicates the disease risks posed by specific livestock and practices in a given locale (if known) and promotes alternative actions and preventive measures</li> </ul>
<b>Market orientation</b>	<ul style="list-style-type: none"> <li>Is able to identify marketing opportunities for nutritious products that will be affordable for many consumers</li> <li>Analyses market opportunities for nutrition-sensitive value chains</li> <li>Estimates capital required and return on investment for investments in nutrition-sensitive value chains</li> </ul>

SOURCE: the authors

Middle-level and senior officials also need capacities to monitor and design appropriate nutrition programmes. These include an ability to work as part of a multisectoral team (with representatives of other organizations/agencies involved in nutrition) and communication, advocacy and leadership skills to engage decision makers on aspects related to nutrition (Fanzo *et al.*, 2015b). They also need some technical skills to address future challenges for nutrition and capacities to engage in nutrition-sensitive planning and investment in food and agriculture.

FAO (2013) identifies guiding principles for agricultural programmes aimed at improving nutrition and some of the capacities needed especially among middle- and senior-level staff who are engaged in development of programmes on nutrition and their monitoring and evaluation. These are listed in Box 8

Points presented in Table 11 and Box 8 can be used to guide efforts to determine capacities in staff at different levels. Information collected should be presented in a table (see Table 12).

Capacities at the individual level of knowledge intermediaries involved in nutrition can be also assessed through organizing an assessment survey of knowledge, attitudes and practices (KAP) at a later stage (FAO, 2014). This should be based on the findings from this broad assessment.

### BOX 8

### GUIDING PRINCIPLES ON AGRICULTURAL PROGRAMMING FOR NUTRITION

#### Planning:

#### Best practice principles

- Incorporate explicit nutrition objectives into agricultural projects, programmes and policies
- Assess the context
- Do no harm
- Measure impact through programme monitoring and evaluation
- Ensure multisectoral coordination
- Maximize impact of household income
- Increase equitable access to productive resources
- Target

#### Doing. Main activities

#### All approaches should:

- Empower women
- Incorporate nutrition education
- Manage natural resources

These can be combined with approaches to:

- Diversify production and livelihoods
- Increase production of nutrient-dense foods
  - Horticultural crops
  - Animal-source foods
  - Underutilized foods
  - Legumes
  - Biofortification
  - Staple crops
  - Cash crops
- Reduce post-harvest losses and improve processing
- Increase market access and opportunities
- Reduce seasonality of food insecurity

#### Supporting principles that

#### enable programmes to achieve nutrition impact

- Improve policy coherence

- Improve governance for nutrition

- Build capacity

- Communicate and continue to advocate for nutrition

SOURCE: FAO (2013)

**TABLE 12** CAPACITIES (TECHNICAL KNOWLEDGE ON NUTRITION AND PROGRAMME DESIGN AND DELIVERY SKILLS) TO ADDRESS NUTRITION AMONG STAFF AT DIFFERENT LEVELS [TICK (✓) THE APPROPRIATE RESPONSE]

No	Capacity	Availability of capacity		
		<i>Adequate</i>	<i>Needs strengthening</i>	<i>Needs to be developed</i>
<b>A</b>	<b>Field-level staff</b>			
1				
2				
3				
4				
5				
6				
<b>B</b>	<b>Middle-level staff</b>			
1				
2				
3				
4				
5				
6				
<b>C</b>	<b>Senior-level staff</b>			
1				
2				
3				
4				
5				
6				
<b>D</b>	<b>Other capacities that need strengthening/ development</b>			
1				
2				
3				
4				
5				
6				

SOURCE: the authors

**BOX 9****TIPS FOR CONDUCTING A FOCUS-GROUP DISCUSSION**

A focus-group discussion (FGD) is a qualitative research method in the social sciences, with a particular emphasis and application in the development programme evaluation sphere. FGDs are predetermined semi-structured interviews led by a skilled moderator. The moderator asks broad questions to elicit responses and generate discussion among the participants. The moderator's goal is to generate the maximum amount of discussion and opinions within a given time period.

**CREATING THE QUESTIONNAIRE**

It is important to take time to carefully plan your questions. Poorly-worded, biased or awkward questions can derail an FGD and reduce the quality of your data.

Keep the number of questions reasonable (fewer than ten, if possible). This prevents the participants from getting confused or worn out by a long discussion.

Keep the questions simple and short. FGD participants will not see the questions, as they would in a survey.

Ensure that the wording on questions is clear. If it is not, participants will end up discussing the question itself, rather than what the question was trying to elucidate.

Ask questions about sensitive issues or topics carefully. Otherwise, the FGD will stop just because people are too embarrassed to answer.

Word the questions in a way that cannot be answered with a simple "Yes" or "No" answer. Using words like "Why" and "How" will help elicit better responses from participants.

**QUESTION TYPES**

There should be three types of questions in an FGD:

**Probe questions:** these introduce participants to the discussion topic and make them feel more comfortable sharing their opinion with the group.

**Follow-up questions:** these delve further into the discussion topic and the participants' opinions.

**Exit question.** This is used to check that you did not miss anything.

SOURCE: the authors

**APPROACH/TOOLS.** Key informant interviews, focus-group discussions or self-assessment questionnaires that individuals could fill in.

**EXPECTED OUTCOMES.** Analysis of capacities at different levels will provide a more accurate basis for designing capacity-development programmes in EAS to address nutrition.

### 4.3.2 Step 6. Synthesis of results

This step involves summarizing, analysing and criticizing your data. This is what you will be presenting at the validation workshop. Either follow the order of the assessment or regroup some questions to present/support major findings. Use graphs and tables to highlight the main findings.

### 4.3.3 Step 7. Validation workshop

The results of the GCNA should be presented in a workshop with key stakeholders representing the different types of actors engaged/interested in this issue (i.e. those identified through

the stakeholder analysis and key informant interviews). This is a very important step before developing the final report.

The workshop should be used to:

- share the main findings;
- seek comments, suggestions for improvement and other relevant perspectives on the topic;
- obtain comments on the methodology to help improve future interventions in the country; and
- assess opportunities for implementing the recommendations, especially ways of developing capacities to implement NSA.

Ensure that the participants have time to provide feedback on the findings and provide additional insights and information. Ideally, share the draft report with the potential participants so that they read it before they attend the workshop.

#### **4.3.4 Step 8. Development of the final report**

In addition to the validated findings of the CNA, the final report should also contain suggestions on improving the assessment methodology. Annex 1 presents a suggested structure for the final report.



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# ► ANNEX 1. FORMAT FOR PRESENTING THE FINAL REPORT

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