



Food and Agriculture Organization
of the United Nations



Bridging the gap between nutrition and agriculture in Côte d'Ivoire

An assessment of capacity within agricultural
extension and advisory services



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Required citation:

FAO. 2022. *Bridging the gap between nutrition and agriculture in Côte d'Ivoire – An assessment of capacity within agricultural extension and advisory services*. Rome. <https://doi.org/10.4060/cb9290en>

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ISBN 978-92-5-135969-3

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► ACKNOWLEDGEMENTS

This report was prepared by the West and Central Africa Network of Agricultural and Rural Advisory Services as a contribution to [*Global capacity needs assessment methodology – Integrating nutrition objectives into agricultural extension and advisory services programmes and policies*](#), published by the Food and Agriculture Organization of the United Nations and the Global Forum for Rural Advisory Services. We thank Edith Adouko Agbo for leading this study and Patrice Djamen for his support.

Special thanks to the participants, institutions, organizations and structures who contributed to the elaboration of this study, in particular: the National Council for Infant Nutrition, Food and Development, the National Nutrition Programme, the National Agency of Rural Development, producers and breeders, and those involved in extension and advisory services.

Lastly, acknowledgements are extended to Joëlle Zeitouny and Ruobin Wu for technical support, Sarah Pasetto for editing, Valentina Gaffi for layout, and Bianca Carlesi and Chiara Deligia for communication support.

▶ ABBREVIATIONS AND ACRONYMS

ACS	community health worker (<i>agent communautaire de santé</i>)
ANADER	National Agency of Rural Development (Agence National de Développement Rural)
ANOPACI	National Association of Agricultural Professional Organizations of Côte d'Ivoire (Association National des Professionnels de l'Agriculture en Côte d'Ivoire)
CERFAM	Regional Centre of Excellence against Hunger and Malnutrition (Centre d'Excellence Régional de Lutte contre la Faim et la Malnutrition)
CIRES	Economic and Social Ivorian Research Centre (Centre ivoirien de recherche économique et sociale)
CNRA	National Centre for Agricultural Research (Centre National de Recherche Agronomique)
CNN	National Nutrition Council (Conseil National de Nutrition)
CONNAPE	National Council for Infant Nutrition, Food and Development (Conseil National pour la Nutrition, l'Alimentation et le Développement de la Petite Enfance)
DSC	Division of Community Health (Direction de la Santé Communautaire)
EAS	extension and advisory services
GAP	good agricultural practices
FGD	focus group discussion
FIRCA	Interprofessional Fund for Agricultural Research and Advisory Services (Fond Interprofessionnel pour la Recherche et le Conseil Agricole)
FRANC	Community Nutrition Reinforcement Activity Centre (Foyer de Renforcement des Activités de Nutrition Communautaire)
GCNA	global capacity needs assessment
GIZ	Gesellschaft für Technische Zusammenarbeit
MFFE	Ministry of Women, Family and Children (Ministère de la Femme, de la Famille et de l'Enfant)
MINADER	Ministry of Agriculture and Rural Development (Ministère de l'Agriculture et du Développement Rural)

MSHP	Ministry of Health and Public Hygiene (Ministère de la Santé et de l'Hygiène Publique)
NSA	nutrition-sensitive agriculture
PMNDPE	Multisectoral Infant Nutrition and Development Project (Projet Multisectoriel de Nutrition et de Développement de la Petite Enfance)
PNMN	National Multisectoral Nutrition Plan (Plan National Multisectoriel de Nutrition)
PNN	National Nutrition Programme (Programme National de Nutrition)
RETPACI	National Network of Agro-transformers in Côte d'Ivoire (Réseau National des Agro-Transformatrices de Côte d'Ivoire)
SACO	African Society of Cocoa (Société Africaine de Cacao)
UNICEF	United Nations Children's Fund
WFP	World Food Programme
CFA	West African CFA franc

▶ EXECUTIVE SUMMARY

Côte d'Ivoire faces the triple burden of malnutrition: undernutrition, micronutrient deficiency and obesity. To reduce malnutrition, the Government should focus on preventive and nutrition-sensitive activities, and coordinate the actions of all sectors involved in nutrition. Among these sectors, the agricultural sector contributes significantly to the improvement of nutrition, particularly through interventions related to agricultural extension and advisory services. However, EAS actors do not always have the capacity to provide nutrition advice. Thus, the Food and Agriculture Organization of the United Nations (FAO), in partnership with the Global Forum for Rural Advisory Services, initiated a study to understand the gaps in learning and capacity among EAS providers in five countries, including Côte d'Ivoire. A global capacity needs assessment methodology was used to undertake this study, and consisted of a literature review, interviews with key informants, surveys, and focus group discussions.

At the national level, several actions have been undertaken to improve nutrition. However, there is neither a common system nor multisectoral coordination, and few qualified human resources; in addition, financial resources are highly dependent on external funds. Several international organizations are involved in nutrition activities, including Action Against Hunger, FAO, Hellen Keller International, Gesellschaft für Technische Zusammenarbeit, Millet Soya Peanut, the Regional Centre of Excellence Against Hunger and Malnutrition, the United Nations Children's Fund and the World Food Programme. These organizations cooperate with local structures, provide funds and work across the country, engaging in specific actions in the northern and the western areas, where malnutrition prevalence remains high. To address capacity gaps, the National Council for Infant Nutrition, Food and Development is creating regional committees to ensure decentralization of the National Multisectoral Nutrition Plan through the Multisectoral Infant Nutrition and Development Project.

This project, which brings all actors together, is characterized by the integration of nutrition and early childhood development interventions in both local and sectoral development plans, and by the enhancement of synergies between nutritional interventions undertaken in different sectors. The project's approach consists of setting up community nutrition reinforcement activity centres that bring together beneficiaries.

International organizations have the logistical capacity to organize programmes and work with structures. However, previously, their activities were specific and not sensitive to nutrition, and they did not always have sufficient staff to address nutrition. Instead, EAS can obtain exposure by publishing brochures, posters, photographs and videos. At the individual level, EAS workers are focused on the activities of support, advice, training, research and development, intermediation, provision of information and support to group animation. These activities have been conducted through specific programmes concerning: good agricultural practices, post-harvest, processing, commercialization, producers' income, food consumption, sustainable management of the environment, and producer and consumer health. However, only about 10 percent of extension workers are involved in a programme that includes nutrition activities. These programmes concern food security, balancing diets, enrichment and production of flour, hygiene and feeding. To address capacity gaps, the ministries involved in nutrition would benefit from strengthened capacities for coordinated multisectoral actions, and coordination platforms could be set up for concerted action by all actors. Organizations would benefit from increased funding and capacities to work effectively with other actors. For individuals, organizations could develop appropriate training modules on nutrition-sensitive agriculture (NSA) and learning materials relevant to the capacity development of EAS workers.

Crop framers and livestock keepers also need training on nutrition, because good nutrition is essential for health. The use of EAS as a channel to train producers and breeders in NSA would be another activity helping to further nutrition goals.

These efforts are all assets for the population.



1 INTRODUCTION

Malnutrition is a public health issue that has fallen on Côte d'Ivoire's health services to resolve. However, nutritional status is influenced by factors at multiple levels (individual, family and community), and across several disciplines. Thus, there is increasing recognition that effective programmes against malnutrition must be multisectoral and must operate at all levels of the chain of causation. The National Council for Infant Nutrition, Food and Development (CONNAPE) and the Scaling Up Nutrition (SUN) movement, to which Côte d'Ivoire acceded in June 2013, focused on the implementation of both specific and sensitive nutrition interventions, all within a multisectoral coordination framework for better efficiency and accountability.

The agricultural sector continually works to improve the nutritional situation in the country by making available diverse and better-quality foods. On top of other efforts, it aims to encourage plentiful, diversified and accessible production for households (via market gardening, small livestock farming, aquaculture, etc.) by strengthening the food transport and distribution system (RoCI, 2016). However, agriculture is not yet actually sensitive to nutrition. Producers and breeders must work to provide more nutritive and healthy food. This would be possible only if they receive advice on nutrition education, diversification of production and off-farm income generation for women, thus establishing synergistic action between nutrition and agriculture. To do this, it is necessary to reinforce the nutrition and agriculture capacities of agricultural extension and advisory services (EAS).

In partnership with the Global Forum for Rural Advisory Services (GFRAS), the Food and Agriculture Organization of the United Nations (FAO) initiated a study to understand the gaps in learning and capacity among providers of EAS. This study targeted five countries, including Côte d'Ivoire. Indeed, food security and nutritional security intersect heavily in the country; some programmes and projects are multisectoral and involve several partners, including entities active in agricultural EAS. The results of these actions would benefit from a rigorous evaluation, to identify the effects and impacts on all target populations.

The study aims at:

- exploring all the opportunities and challenges associated with integrating nutrition-related objectives into agricultural programmes and policies;
- identifying capacity needs of EAS providers at the organizational, policy and enabling-environment level (the latter includes aspects such as institutional structures, opportunities and challenges, workload, and financial and non-financial incentives), in order to strengthen their capacities to integrate nutrition outcomes into regular tasks and responsibilities; and
- identifying knowledge gaps to inform training materials on nutrition-sensitive agriculture (NSA), for example on designing NSA investments.

The study used a global capacity needs assessment (GCNA) within the NSA methodology developed by GFRAS and FAO to explore this issue. This report presents the findings of the GCNA pilot testing in Côte d'Ivoire. The report is organized in three sections: introduction; methodology and approach; and study findings. The latter section presents the capacity gaps at the enabling-environment, organizational and individual levels in Côte d'Ivoire.

2 METHODOLOGY

The overall approach was based on the GCNA methodology steps: a review of documents (reports, articles); key informant interviews; surveys; and focus group discussions (FGDs).

The literature review enabled identification of the national nutrition, policy and agriculture contexts and EAS actions in the country, as well as comprehension of the linkages between them. The key stakeholders active in these areas were also identified.

The interviews and surveys (questionnaires) focused on nutrition and EAS (see Annex 2). They were conducted among:

- national institutions – CONNAPE, the National Nutrition Programme (PNN), the Multisectoral Infant Nutrition and Development Project (PMNDPE)
- ministries – Ministry of Agriculture and Rural Development Ministry (MINADER); Ministry of Health and Public Hygiene (MSHP); Division of Community Health (DSC) of the MSHP; Ministry of Women, Family and Children (MFFE)
- international organizations – FAO, World Food Programme (WFP), Regional Centre of Excellence Against Hunger and Malnutrition (CERFAM), Helen Keller Institute (HKI)
- national organizations – National Agency of Rural Development (ANADER), National Association of Agricultural Professional Organizations of Côte d'Ivoire (ANOPACI), Economic and Social Ivorian Research Centre (CIRES), Nangui Abrogoua University, National Network of Agro-transformers of Côte d'Ivoire (RETPACI)

At the individual level, surveys and FGDs were conducted (see Annexes 3 and 4, respectively). Interviews were held with EAS workers from ANADER, RETPACI and ANOPACI. In particular, ANADER has divided the country into seven agricultural regions and 57 zones of activity. Accordingly, at least two rural development officers per zone were required for the individual-level surveys (one rural development officer for agriculture and another one for breeding). A total of 138 rural development officers were interviewed (113 men and 25 women).

The FGDs were conducted with crop farmers and livestock breeders. Six FGDs were conducted in three randomly chosen zones (Dabou, Divo and Yamoussoukro), with a total of 37 participants. At Divo, a meeting was held with the Benkadji group (ten members) and the Tchepolotahan group (six members). At Yamoussoukro, it was possible to meet the Pig Breeders Cooperative of Côte d'Ivoire (CEPORCI) (three members) and some producers of vegetables (five members). At Dabou, a meeting with vegetable producers (seven members) and a group of breeders (six members) was held.

3 CAPACITY GAPS

3.1 The enabling-environment level

3.1.1 The country nutrition context

Stunting is the most common form of malnutrition in Côte d'Ivoire among children under 5 years old. The national rate of stunting is serious, compared to the international acceptability rate of 20 percent. According to the National Centre for Health Statistics, the stunting rate was equivalent to 34 percent in 2006; a figure which still exceeded the acceptability rate in 2016, standing at 21.6 percent according to the World Health Organization (WHO) (INS and UNICEF, 2017). Although a downward trend was registered in all regions, the rate remains close to the critical threshold of 40 percent in the northern area and in some western regions because of previous crises (Figure 1). For more than ten years, the national prevalence rate of acute malnutrition or wasting has stagnated at around 6 percent (SUN, 2018). This is lower than the alert threshold of 10 percent, which has been met in areas of nutritional emergency in the northern part of the country. The number of children under 5 years old who are underweight has decreased significantly, from 21 percent in 2006 to 12.8 percent in 2016. However, this number has yet to reach the “acceptable” threshold of 10 percent (INS and UNICEF, 2017). Underweight prevalence is considered serious in some areas.

FIGURE 1 REGIONS MOST AFFECTED BY MALNUTRITION IN CÔTE D'IVOIRE



SOURCE: adapted from Map No. 4312 Rev. 3, United Nations Department of Field Support, Cartographic Section, 2011.

Regarding micronutrient deficiencies, there are no recent national data. In 2012, the prevalence of anaemia was estimated to be 75 percent in children under 5 years old, 54 percent in women of childbearing age and 30 percent in men from 15 to 49 years old (INS and ICF, 2013). Anaemia is partly due to iron deficiency, the most common form of micronutrient deficiency. In previous studies, it was estimated that iron deficiency is responsible for approximately 80 percent of cases of anaemia in children, 50 percent of cases in women and 20 percent of cases in men (MSLS, 2012). As for vitamin A deficiency, despite a decline registered in the early 2000s from 33 percent to 26.7 percent, 60 percent of children from 6 to 59 months are still found to be at risk (RoCI, 2016). Vitamin A supplementation corrects deficiency and increases the growth and immunity of all children, reducing child mortality by 25 percent (Horton, 2008; Black *et al.*, 2013).

Regarding the prevalence of iodine deficiency, the almost universal consumption of iodized salt in Côte d'Ivoire (90 percent of households) suggests that it is very low and that disorders due to iodine deficiency are in the process of being eliminated. Prevalence of goitre among preschool and school-age children has decreased, from 40 percent in 1994 to 4.8 percent in 2004 (RoCI, 2016).

In view of certain clinical signs that are widespread in the population, the recurrence of certain deficiencies (zinc, calcium, magnesium, etc.) should be evaluated. For example, the positive impact of zinc supplementation on development in stunted children, and the prevalence of childhood symptoms such as diarrhoea, suggest that zinc deficiency may be a significant public health problem. In addition, supplementation with calcium and magnesium in pregnant women could reduce the occurrence of eclampsia. This intervention should be considered, given the high maternal mortality rate (WHO, 2004). Additionally, vitamin B1 deficiency occurs in prisons and recurs with epidemic peaks.

The problem of overnutrition, characterized by overweight and other metabolic overload issues, affects adults especially – 19.4 percent of men and 25 percent of women (SUN, 2018). Approximately 33.7 percent of adults from 30 to 70 years old have high blood pressure, 19.9 percent have high cholesterol and 9 percent have high blood sugar levels (WHO, 2014).

The immediate causes of malnutrition are:

- a lack of diet diversification, which can be seen in all age groups;
- dietary habits characterized by high consumption of fat, salt or sodium, sugar and sugary foods and drinks, which contribute to overweight; and
- the modification of diets (adoption of new Western-style diets and fast food at the expense of traditional diets), juxtaposed with an increasingly sedentary lifestyle, which leads to a rapid increase in overweight and obesity prevalence and, in turn, an increase in chronic diseases (WHO, 2011).

The underlying causes of malnutrition are:

- limited access to food for many households, although the national food availability (production and imports) is globally satisfactory;
- limited access to food in food-insecure households due to insufficient agricultural production combined with low purchasing power, which hinders filling the production gap with supplies on the market;
- scarce access to basic social services such as health, education, drinking water and sanitation in certain regions; and
- low access to functional health facilities offering nutrition services – in 2010, only 11 percent of health facilities provided education on good nutritional practices, and only 27 percent had nutrition materials and were trained in communicating to achieve behaviour change.

The root causes of malnutrition are:

- climate change, illiteracy and a decade of politico-military crises (2000–2010) marked by increasing poverty, factors that negatively affect nutrition;
- increase in the proportion of the population living below the poverty line, from 33.6 percent in 1998 to 48.9 percent in 2008, as found by the National Nutrition Council (CNN);
- the relatively low proportion of women of childbearing age with any education, equivalent to 53 percent in 2012 (CNN, 2015); and

- rampant urbanization and industrialization, which are creating new, sedentary lifestyles and changing diets such that people are exposed to overnutrition (WHO, 2011; RoCI, 2016).

3.1.2 The policy context influencing nutrition outcomes

Since independence, Côte d'Ivoire's commitment to nutrition has translated to several actions, including the enactment of national measures and the ratification of international commitments related to nutrition. These commitments include:

- establishment of the health and nutrition projects financed by UNICEF (1989);
- development of a master plan for agricultural development for the achievement of food self-sufficiency (1992);
- participation in the FAO and WHO International Conference on Nutrition in Rome (1992);
- Decree No. 94-303 of 1 June 1994, authorizing the use of salt to support the fight against iodine deficiency;
- including the fight against malnutrition and micronutrient deficiencies among the priorities of the National Health Development Plan (1996);
- Interministerial Decree No. 18 MS/MC of 3 April 1996 mandating the iodization of salt for human and animal consumption;
- Decree No. 98-676 of 25 November 1998 establishing school canteen management;
- Order No. 410 of 28 December 2001 on the establishment, organization and operation of the Coordinating Department of the PNN;
- Interministerial Decree No. 25 of 18 January 2007 making obligatory the fortification of breadmaking wheat flour with iron and folic acid;
- Interministerial Decree No. 26 of 18 January 2007, making the vitamin A fortification of edible oils for human and animal consumption mandatory;
- establishment of an early warning system at the MINADER level (2007);
- participation in the World Summit on Food Security in Rome (2009); and
- the inclusion of nutrition in the 2008 Poverty Reduction Strategy Paper, in the 2012-2015 National Development Plan and in the 2009–2013 National Health Development Plan. Côte d'Ivoire has also defined structuring sectoral policies, including the 2012-2016 National Agricultural Investment Programme, the 2013–2015 National Strategy for Social Protection, the 2012-2017 National School Food Policy and the 2018-2025 National Agricultural Investment Programme.

Despite this willingness to act, structural weaknesses continue to dampen efforts to scale up nutrition interventions in the country. The national response helped to solve several problems in emergency situations. However, a number of shortcomings have prevented a tangible reduction in malnutrition. These include:

- difficulties in intersectoral coordination and inadequate institutional anchoring;
- lack of synergy between different interventions;
- low availability of qualified human resources; and
- insufficient financial resources, with heavy dependence on external funding.

Despite the creation of a budget line for nutrition, the allocation of resources did not reflect the level of priority accorded. Nutrition funding accounts for 0.53 percent of health expenditure, and the national response to the crisis spanning the last decade has focused on curative, rather than preventive and promotional, interventions (58.2 percent versus 5.5 percent of the nutrition budget, respectively) and areas with high prevalence of acute malnutrition (RoCI, 2016).

From an analysis of the nutritional situation, the causes of malnutrition and the national system to manage nutrition problems, it is clear that Côte d'Ivoire faces the triple burden of malnutrition and must find solutions to both undernutrition problems and the increase of obesity and metabolic overload. Thus, interventions will need to focus on prevention activities to a much greater extent; this, in turn, will contribute to a significant reduction of malnutrition in all its forms.

The National Nutrition Policy adopted in 2008 already embraced a multisectoral approach as a means to scale up actions in the nutrition sector. However, there was no formal coordination and monitoring framework applying to actions across the different sectors. The study also highlighted the following weaknesses:

- a lack of multisectoral coordination of activities at both the central and peripheral levels;
- the fact that malnutrition remains essentially linked to food security;
- insufficiency of financial resources and heavy reliance on the external financing sector;
- low availability of qualified human resources, which prevents capitalization on achievements;
- inadequacies related to the health system, characterized by a shortage of qualified personnel who can deal with nutrition problems and a low availability of essential contributors;
- nutritional and community-based interventions that remain in the beginning stages, cannot be sustained over time and inspire little community ownership;
- presence of socio-cultural factors that are harmful to the adoption of good nutritional practices (food value, how to choose and buy food, how to prepare and manipulate food, proper stocking practices, transformation and conservation, equitable division of food in the family); and
- the lack of a common system of indicators for monitoring nutrition activities in all sectors.

Thus, recognizing that the causes of malnutrition are complex and multifactorial, and that effective actions require the convergence of and synergy between all concerned sectors, Côte d'Ivoire joined SUN in June 2013 and created the CNN in July 2014. The CNN, which is chaired by the Prime Minister of Côte d'Ivoire, provides a platform for coordinating actions across all sectors to bring about more effective management and nutrition intervention programmes. The new National Nutrition Policy sets out guidelines for coordinated response from different sectors, in order to sustainably improve the population's nutritional status and foster more inclusive growth and development. Through the policy, the Government reaffirms that nutrition is a national priority. These commitments are reflected in the 2016-2020 National Multisectoral Nutrition Plan (PNMN), which is an integral part of the 2016-2020 National Development Plan.

The 2016-2020 PNMN focuses on two main types of interventions: sensitive and specific. Several actions are already under way in all sectors. However, better coordination would significantly improve results. Efforts will be made to target the regions and departments most affected by malnutrition. The overall goal of this plan is to improve the population's nutritional status.

The PNMN sector objectives are to:

- reduce the proportion of the population falling short of the minimum level of calorie intake from 20.5 percent to 15 percent;
- increase the exclusive breastfeeding rate from 12 percent to 50 percent;
- ensure that 40 percent of the population adopt essential nutrition actions;
- provide universal health coverage to 80 percent of the population;
- reduce the proportion of households with food insecurity in rural areas to below 10 percent;
- reduce the prevalence of diseases related to contaminated food;
- in areas with a high prevalence of malnutrition, ensure that access to clean water rises from 77 percent of the population to the entire target population;
- provide food at all school canteens in areas where there is a high prevalence of malnutrition and food insecurity; and
- provide social services to 70 percent of the highly vulnerable population.

The strategic orientations are the following:

- promotion of good nutritional practices and preventive measures;
- strengthening the management of malnutrition;
- increasing availability of and access to nutritious and diversified food for consumption;
- reinforcing food safety;
- strengthening household resilience to food and nutrition crises;
- improvement of hygiene and access to drinking water and sanitation systems; and
- creating an enabling environment for nutrition and enhancing governance.

The agricultural sector is involved in these strategic directions. Several programmes – including the National Agricultural Investment Programme and the Strategic Plan for the Development of Livestock, Fisheries and Aquaculture in Côte d'Ivoire – contribute to improving the nutritional situation in the country by fostering diversity and food availability. Among other things, the agricultural sector aims to encourage sufficient, diversified and accessible production methods for households (market gardening, small livestock farming, aquaculture) by strengthening the food transportation and distribution system. It is also necessary to ensure good techniques for storage, conservation and processing of food (producers and households), in order to prolong the availability of varied and quality foodstuffs. Strengthening food safety is also intensified, as food safety and nutrition are closely linked to one another. Actions will focus on aspects including risk assessment and risk management, as well as raising awareness of good practices among actors (producers, processors, distributors and households).

In January 2018, the PMNDPE was implemented. This project is innovative both in terms of its methodological approach and its method of intervention, which is based on the two principles underlying the PNMN: convergence and decentralization. The added value of the PMNDPE lies in the integration of nutrition and early childhood development interventions in both local and sectoral development plans, and in increasing synergies between nutritional interventions in different sectors. The approach consists of setting up Community Nutrition Reinforcement Activity Centres (FRANCs), which bring together the beneficiaries. The organization and activities in each FRANC are planned and supervised by its local steering committee, which operates under the direct supervision of the village chief and local dignitaries. Bringing communities to set up FRANCs requires local facilitation and training, which are tasks assigned to local executing agencies with an adequate community presence. These agencies, which initiate and facilitate the process of mobilization and appropriation of activities, are full members of the relevant subprefectural nutrition coordination committees and involve local public service providers (health, agriculture, education) and all other relevant actors at the local level.

The PMNDPE is currently implemented in 14 administrative regions (Bafing, Bagoué, Bélier, Béré, Bounkani, Folon, Gontougo, Haut-Sassandra, Iffou, Kabadougou, Marahoué, Poro, Tchologo and Worodougou). It targets 1 100 000 children under 2 years old and 265 000 women. It will be extended progressively to other regions.

On 26 June 2019, Decree No. 569 was issued to create CONNAPE in replacement of the CNN, and transferred it from the Prime Minister's Office to the Vice Presidency. The actions of the Executive Secretariat of CONNAPE are related to the reduction of malnutrition, the elimination of hunger and the development of early childhood. The body works to federate actions across all sectors and actors. To facilitate coordination, the multi-stakeholder platform was strengthened with the establishment of a parliamentarian network and a business network.

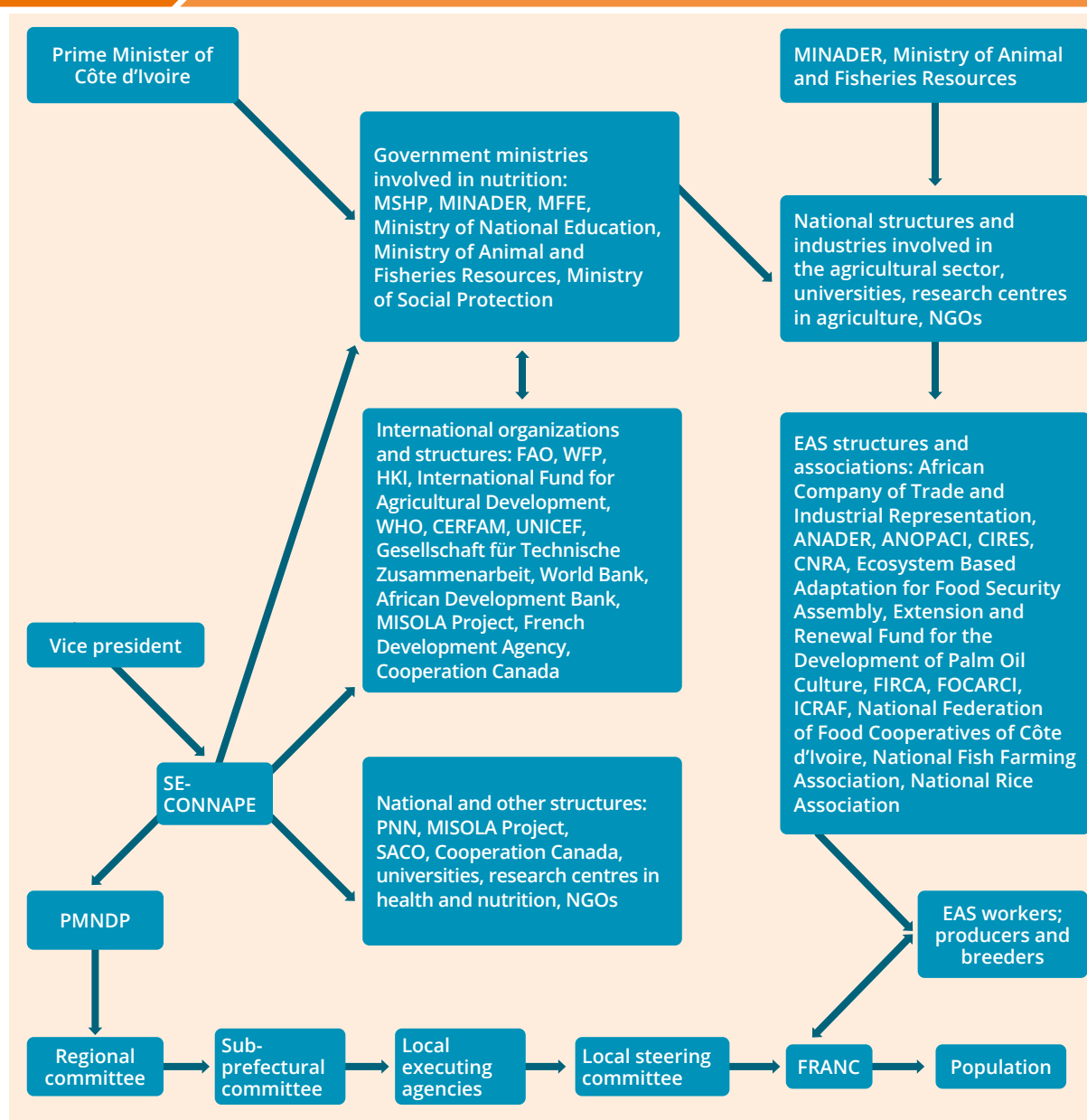
For CONNAPE, the challenge is to ensure that ministries integrate nutrition and that all activities carried out become an asset for the population. The objectives of sectoral food security and nutrition policies in Côte d'Ivoire explicitly envisage coordination. However, in practice, most activities take place without a real platform for collaboration and exchange. In fact, food security and nutrition programmes are poorly integrated, and ministries continue to operate in a compartmentalized manner, establishing their own frameworks and defining their own indicators. In addition, not all sectors deemed essential are actively involved from the start of strategic planning through to implementation and monitoring and evaluation, which poses accountability problems. The PMNDPE attempts to remedy this situation by working with all ministries, bringing about synergies in actions, sustainability of activities and ownership by all relevant parties.

3.1.3 Stakeholder mapping

Ministries and international organizations are implicated in nutrition and cooperate with national structures (Figure 2). The MSHP addresses the specific problem of nutrition via the PNN. Other ministries and sectors also address the sensitive problem of nutrition: MINADER and the Ministry of Animal and Fisheries Resources collaborate with international organizations, national agricultural structures and non-governmental organizations (NGOs) that coordinate EAS activities with producers and breeders.

FIGURE 2

STAKEHOLDER MAPPING



Note: FIRCA = Interprofessional Fund for Agricultural Research and Advisory Services; FOCARCI = National Forum of Rural and Advisory Services of Côte d'Ivoire; ICRAF = International Centre for Research in Agroforestry.

SOURCE: Authors' own elaboration.

3.2 The organizational level

3.2.1 The organizations selected for detailed organizational assessment

Several organizations were contacted; however, only a limited number responded to contribute to the study. At the national level, interviews were conducted with CONNAPE, PNN, PMNDPE, various ministries (MSHP, MINADER and MFFE), the DSC, the Pandemic Support Programme, ANADER's Department of Support for Plant and Animal Production Chains, RETPACI, ANOPACI, Nangui Abrogoua University and CIRES.

At the international level, interviews were conducted with FAO, WFP, CERFAM and HKI. Table 1 shows the institutions and organizations involved in nutrition and EAS.

Through the execution of the PMNDPE, CONNAPE ensures that activities withing FRANCS are nutrition-specific (weighing of children, management of malnutrition, culinary activities, addressing early childhood development) and nutrition-sensitive (vegetable gardens, small farming, play areas). Each community identifies its needs, and the project helps to address them. The PMNDPE reinforces structures (whether public, NGOs or technical structures) that work with communities through training and equipment. It also boosts the quality of services in provided in health structures, coordinates national activities with stakeholders and elaborates work plans.

The DSC coordinates community health interventions. In communities that are far from health centres, the DSC mainly relies on non-health workers, who are called community health workers (ACS), and act as intermediaries for nurses in health areas. The ACS work under the supervision of doctors and nurses. The DSC trains the ACS and works with the ANADER Pandemic Support Programme.

The Pandemic Support Programme's activities include collaboration in the PMNDPE project; revision of job descriptions to include nutrition sensibilization; capacity development for rural development workers through training; monitoring and promotion of the growth of children aged from 0 to 20 months; ensuring that 50 percent of children under 6 months of age are exclusively breastfed; active screening for acute malnutrition in children from 6 to 59 months; and management of cases of acute malnutrition.

TABLE 1 INSTITUTIONS AND ORGANIZATIONS INVOLVED IN EXTENSION AND ADVISORY SERVICES AND NUTRITION

Name of institution or organization	Key roles performed	Region or target group
<i>National</i>		
DSC	<ul style="list-style-type: none"> • Coordinate community health interventions • Train community health workers on health and nutrition programmes 	Whole country
MINADER and the Ministry of Animal and Fisheries Resources	<ul style="list-style-type: none"> • Promote food sanitary quality, food security, nutritional security, seed biofortification • Train producers for food quality • Provide nutritional education to producers in rural areas 	Whole country
MFFE	Reinforce life competencies, alphabetization, rural women empowerment, childhood protection, and creation of canteens and community centres for child development	Whole country
PNN	<ul style="list-style-type: none"> • Address specific problems of nutrition • Improve the population's nutritional status (children, women, seniors, incarcerated people) • Train relevant nutrition actors; promote breastfeeding • Fight against vitamin deficiencies, HIV and chronic diseases 	Whole country

Name of institution or organization	Key roles performed	Region or target group
PMNDPE	<ul style="list-style-type: none"> • Make FRANC activities nutrition-specific (weighing of children, management of malnutrition, culinary activities, early childhood development) and nutrition-sensitive (vegetable gardens, small farming, play area) • Reinforce the structures that work with communities (public structures, NGOs and technical structures) through training and equipment • Boost quality of services in health structures, coordinate national activities with stakeholders and elaborate work plan 	In 14 administrative regions: Bafing, Bagoué, Bélier, Béré, Bounkani, Folon, Gontougo, Haut-Sassandra, Iffou, Kabadougou, Marahoué, Poro, Tchologo and Worodougou
ANADER / Pandemic Support Programme and the Department of Support for Plant and Animal Production Chains	<ul style="list-style-type: none"> • Provide EAS to producers and breeders • Revise job descriptions to include nutrition sensibilization • Build capacity for rural development workers • Monitor and promote growth of children from 0 to 20 months of age • Ensure that 50 percent of children under six months are exclusively breastfed • Active screening for acute malnutrition in children from 6 to 59 months • Manage cases of acute malnutrition 	Whole country
Interprofessional Fund for Agricultural Research and Advisory Services	Provide financial fund for agriculture research and EAS	Whole country
National Centre for Agricultural Research	<ul style="list-style-type: none"> • Research agriculture • Help producers and breeders to apply agricultural programmes 	Whole country
Universities and research institutes	Research agriculture, food, nutrition, and the environment	Whole country
National Forum for Agricultural and Rural Advisors of Côte d'Ivoire	Promote EAS among producers and breeders	Whole country
<i>International</i>		
FAO	Invest in culture diversification, bio-production, strengthening of agricultural components for sweet potatoes, agroecology, aquaculture, technology in nutrition, women's empowerment, nutritionist training at health centres, above-ground cultivation, and NSA	Western and northern areas
World Food Programme	Assists the government in the development of appropriate strategy policies in terms of nutrition, awareness of agricultural techniques, rice enrichment, processing (drying of local products), capacity development and training in nutrition	Whole country

Name of institution or organization	Key roles performed	Region or target group
Regional Centre of Excellence Against Hunger and Malnutrition	<ul style="list-style-type: none"> Promote good practices in the fight against hunger and malnutrition Identify practices against hunger and malnutrition Support and facilitate the mobilization of expertise that helps in the implementation of good practices and development of South-South cooperation 	Whole country and in the West Africa region
Helen Keller Institute	<ul style="list-style-type: none"> Combat the causes and consequences of blindness and malnutrition by creating programmes that build on established experiences and research in the field of vision, health and malnutrition Support model village farms and vegetable gardens in the production of crops rich in high-value nutrients and strengthen capacities of producers Promote good NSA practices and good poultry practices Support post-harvest handling and marketing technologies and research (studies), particularly on orange-fleshed sweet potatoes 	Northern areas

SOURCE: Authors' own elaboration.

3.2.2 Mandates

Several international organizations active in the country – including FAO, WFP, HKI, WHO, CERFAM and UNICEF – have a direct mandate related to nutrition. The other organizations (French Development Agency, Gesellschaft für Technische Zusammenarbeit [GIZ], World Bank, African Development Bank, International Fund for Agricultural Development) have indirect mandates; however, they invest in nutrition.

The national structures that have mandates directly related to nutrition are CONNAPE and PNN (through the MSHP). The other ministries and structures have an indirect mandate related to nutrition and they work with CONNAPE, using a multisectoral approach, on sensitive nutrition.

3.2.3 Specific programmes implemented on nutrition

Structures and organizations pursue several nutrition-related activities, as may be seen in Table 2.

TABLE 2 SPECIFIC PROGRAMMES ON NUTRITION

No.	Organization	Nature of programmes	Type or category of clients served	Number of such interventions per year, or number of clients directly reached	Partners in these interventions
1	ANADER, WFP, RETPACI	Advise rural communities on the importance of dietary diversity	Producers, women	Year-round, more than 3 000 agricultural groups and 10 000 customers	WFP, FAO, MSHP (DSC), PNN
2	RETPACI, WFP	Nutrition trainings (organization of lectures and classes on nutrition from different food sources) as part of a specific programme (with expected nutrition outcomes)	Structures, producers, transformers	300 times a year	PNN, FAO, MISOLA Project, CNN, HKI, PMNDPE, Government of the United States of America, CERFAM, international NGOs

No.	Organization	Nature of programmes	Type or category of clients served	Number of such interventions per year, or number of clients directly reached	Partners in these interventions
3	WFP	Promotion of kitchen gardens	Schools with canteens	All school canteens covered by WFP	School canteens Direction of the Ministry of National Education
4	WFP	Promotion of school gardens	Workers in schools with canteens	613 schools	School canteens Direction of the Ministry of National Education
5	ANADER	Distribution of seeds, seedlings and fruit planning material	Producers	Year-round	CNRA, ICRAF
6	FAO, RETPACI, WFP	Organize women farmers to help them with production, marketing and value addition	Women, youth, cooperatives	80 women groups in the western Côte d'Ivoire (FAO), 150 women (RETPACI), more than 3 000 agricultural groups (WFP)	SACO, Cooperation Canada, ANADER
7	WFP, FAO	Promote crop diversification	Producers	More than 3 000 agricultural groups	ANADER, ICRAF, HKI, CNRA
8	WFP	Organize food distribution	Returnees	More than 3 500 returnees	UNHCR
9	FAO, WFP, universities	Conduct research on nutrition	Entire population	Several projects	FIRCA, SACO, CESO, National Institute of Public Hygiene, HKI, CNRA, CONNAPE
10	FAO, WFP, RETPACI	Promote value addition of food	Women, youth	300 interventions, 15 000 customers, more than 3 000 agricultural groups	FIRCA, Early Childhood Development Campaign, SACO, Cooperation Canada, ANADER
11	HKI, FAO	Develop and promote biofortification	Transformers	200 groups	Ministries, CNRA, NGOs
12	WFP	Promote cooking methods that preserve nutrients in fruits and vegetables	Women, schools	More than 3 500 beneficiaries	RETPACI, HKI, school canteens, Direction of the Ministry of National Education
13	RETPACI	Provide supplementary feeding programme to the needy	Population	300 times	PNN
14	WFP	Organize school feeding programmes	Schools, children	125 000 pupils	NGOs, school canteens, Direction of the Ministry of National Education

Note: FIRCA = Interprofessional Fund for Agricultural Research and Advisory Services;

ICRAF = International Centre for Research In Agroforestry.

SOURCE: Authors' own elaboration.

3.2.4 Investments for addressing nutrition

Certain organizations (FAO, WFP, CERFAM) set aside specific funds for nutrition interventions (FAO, WFP, CERFAM). For example, FAO invests one-quarter of its budget in nutrition, while HKI directs 80 percent of its budget towards nutrition; WFP and CERFAM invest their entire budget in nutrition. At WFP, all activities are now oriented towards addressing nutrition-sensitive intervention. CONNAPE has designated funds for nutrition and contributes to the execution of specific collaborative programmes with ministries. A financial monitoring framework is in place to assess partner and state resource mobilization for implementation of the PNMN. The Government of Côte d'Ivoire contributes only to 15 percent of the investment in the PNMN; the remaining 85 percent is provided by technical and financial partners. The financial support provided by partners for the period 2016–2018 amounted to 101.6 billion CFA, with an implementation rate of stated financial intentions of 25.3 percent. Sensitive and direct interventions are tracked via the Public Investment Programme.

3.2.5 Human resources deployed to address nutrition

Certain organizations (FAO, WFP, HKI, PNN, PMNDPE) have adequate staff for addressing nutrition in general. They provide some staff with training on nutrition interventions and sensitive activities (nutrition, management, agriculture and communication) at health centres. They then provide training on nutrition to staff working in structures involved in agriculture intervention. In general, for EAS structures, staff who can effectively design, implement or supervise nutritional intervention is lacking, and training on NSA is not yet common.

3.2.6 Organizational challenges in addressing nutrition

One of FAO's major themes relating to nutrition and agriculture – the sustainable intensification of production and value chain development – is beginning to be integrated in Côte d'Ivoire's policies. Efforts to raise awareness at the national level have commenced recently. Among the challenges are the need to change diet and eating habits, create fields of fruit trees and develop a post-harvest process.

For CERFAM, the challenge consists in working effectively with other actors, changing behaviours and integrating nutrition in school programmes. For HKI, the constraints include access to water for continuous production during wetting and off-season periods (the dry season), women's access to land and transformation of productions.

3.2.7 Partnerships

Organizations work in partnership with the Government and among themselves. They also contribute to addressing nutrition with EAS.

In 2012–2013, FAO collaborated with ANADER to train rural development workers on malnutrition and help women create vegetable gardens. In addition, FAO and WFP conducted a project on NSA. This project, which is implemented within FRANCs, establishes a link between agriculture and nutrition. FAO also invested in media training, contributing to the creation of the Nutri Media network.

WFP has long supported the sustainability programme for school canteens in Côte d'Ivoire. The programme has had a positive impact on school enrolment rate, especially among young girls, by reducing early pregnancies and improving the nutritional status of school-age children. In the programme, WFP works in partnership with ANADER to sensitize producers to agricultural technologies and to introduce certain crops (orange-fleshed sweet potatoes) in systems. It also collaborates with the MSHP for group sensitization on nutrition.

With the support of WHO, Côte d'Ivoire has implemented several projects and supported the production of documents on good nutritional practices and the management of malnutrition. Côte d'Ivoire and UNICEF have implemented the 2014–2016 cooperation programme on nutrition.

These partnerships demonstrate that a collaboration platform exists and makes a significant contribution to addressing nutrition in EAS.

¹ CFA 1 = USD 604.62 as at 15 January 2016 (United Nations, 2021)

3.3 The individual level

3.3.1 Individual assessment

Rural advisors are generally rural development, agricultural or breeder technicians. Their EAS activities have focused on support or advice, training, research and development, intermediation, information and group animation, and mass communication (Table 3).

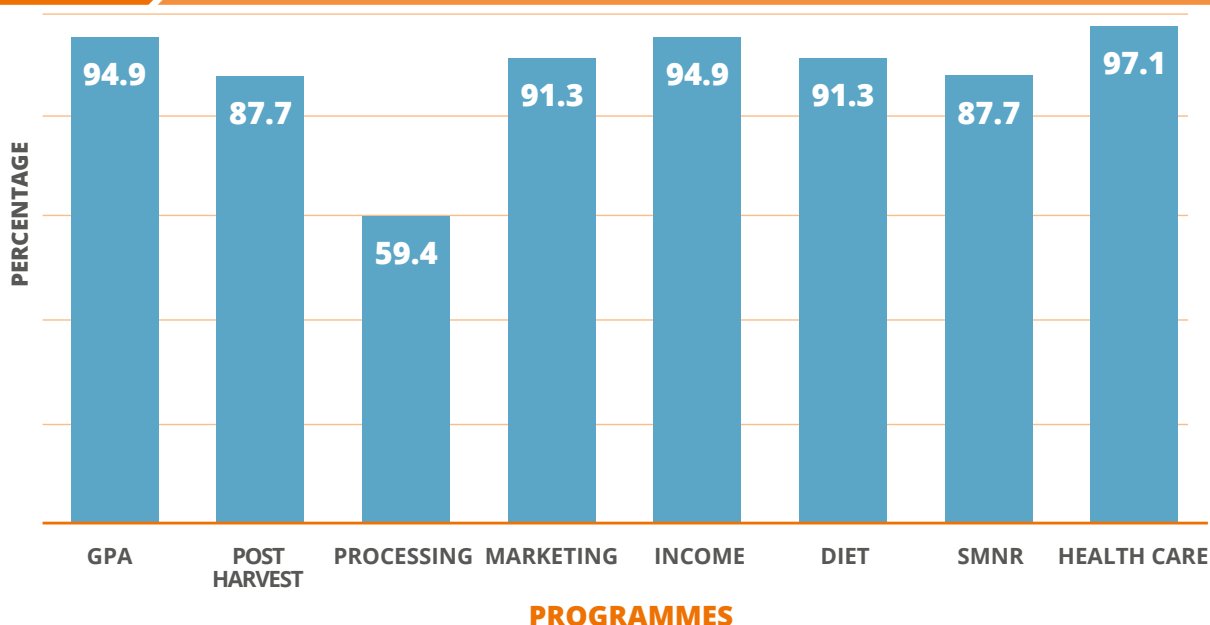
These activities were conducted in specific programmes initiated by national and international structures. The activities are related to good agricultural practices (GAP), post-harvest, processing, marketing, income, diet, sustainable management of natural resources, and producer and consumer health care. Figure 3 illustrates the repartition of EAS workers according to their intervention domains.

TABLE 3 REPARTITION OF RURAL ADVISORS ACCORDING TO THEIR EXTENSION AND ADVISORY SERVICE ACTIVITIES

Numeration	Activities	Rural advisors (percent)
1	Support/advice and training	4.4
2	Support/advice, training and mass communication	3.6
3	Support/advice, training, and information and group animation	31.9
4	Support/advice, training and intermediation	39.1
5	Support/advice, training, and research and development	17.4
6	Support/advice, information and group animation, and research and development	1.5
7	Support/advice, intermediation, and information and group animation	0.7
8	Training	1.5

SOURCE: Authors' own elaboration.

FIGURE 3 THEMES ADDRESSED BY EXTENSION AND ADVISORY SERVICES



Note: SMNR = sustainable management of natural resources

SOURCE: Authors' own elaboration.

NUTRITION PROGRAMMES IN EXTENSION AND ADVISORY SERVICES

Only 11.6 percent of advisors have a nutritional counselling programme. These programmes are related to food needs, balance of meals, enrichment and flour production, soy incorporation in diet, alimentation, hygiene (food and environmental), feeding, nutrition education, culture and food diversification.

Extension advisors work with crop farmers and livestock keepers. Actors have not always perceived the link between agriculture and nutrition; however, they have nutrition-specific activities (monitoring and promotion of the growth of children from 0 to 20 months old, management of malnutrition, culinary activities, early childhood development) and nutrition-sensitive activities (vegetable gardens, small farming).

The programmes are undertaken in collaboration with GIZ, HKI, MISOLA Project, PMNDPE, FAO, PNMN, CERFAM, WFP, Action Against Hunger, UNICEF, UN Women, CERFAM, school canteens, the Red Cross and PNN.

According to the 138 advisors surveyed, a nutritional counselling programme will add value to EAS by contributing to crop diversification and food preservation, increasing food quality and quantity, and improving diet. The EAS technicians indicated that there are advantages and disadvantages to providing nutritional advice.

- The advantages are: nutritional advice that will help contribute to the well-being of the population, including producers and breeders; better health; good nutrition; correcting vitamin deficiency; improving eating habits; protecting mothers and their children; avoiding malnutrition; and contributing to protecting populations against infectious diseases.
- The disadvantages could be: misunderstanding of themes; refusal and non-involvement of producers; and a lack of good nutrition knowledge.

The technicians believe that the major difficulties they are likely to face are funding, a lack of material resources, the implementation of different modules, the mobilization of producers and the food habits of the population. However, the integration of nutrition into EAS should not be considered a constraint, because EAS already work with the target population. Moreover, approximately 95.7 percent of advisors wish to integrate nutrition in EAS because this is envisaged to improve the quality of food, health, hygiene, food diversification and food security, as well as prevent malnutrition.

The respondents all believe that the integration of nutrition into EAS is important; however, they also consider that it will increase their workload and express the concern that they may not have sufficient technical knowledge.

For 75.4 percent of the advisors, some difficulties may be encountered when collaborating with the ministries in charge of food policies and nutrition. These difficulties are due to a lack of funding and materials, of communication and exchange platforms, and of team spirit. However, such collaborations are indispensable to help promote the need to integrate nutrition in EAS, improve knowledge, exchange information, work closely with the Government, conduct participative actions, improve communication and divulge appropriate messages.

EXTENSION AND ADVISORY SERVICE WORKER SKILLS

Most of the EAS workers surveyed (63.8 percent) have a background as an agricultural technician. Approximately 23.9 percent of the respondents are breeder technicians, while only 1.5 percent have a food processing background. Table 4 illustrates their operational level. Some EAS workers (25.4 percent) have a background in nutrition; their knowledge was mostly gained during university studies or trainings given by organizations such as GIZ, FAO, HKI and NGOs.

Around 82.6 percent of respondents are not aware of training modules on NSA, although they consider that initiating trainings to help all actors better understand the link between agriculture and nutrition would be ideal. The themes that could be developed in these trainings should include knowledge of food, NSA, food balance, diets according to age and activities, food groups, elaboration of menus, improvement of diets, nutritional education, child nutrition and transformation of local food.

TABLE 4 OPERATIONAL LEVEL OF RURAL ADVISORS IN EXTENSION AND ADVISORY SERVICE ACTIVITIES

Operational level	Rural advisors (percent)
Conception agents	2.2
Supervision agents	14.5
Execution agents	62.3
Conception and supervision agents	12.3
Conception and execution agents	1.5
Supervision and execution agents	7.3

SOURCE: Authors' own elaboration.

OPERATIONAL SUPPORT OF EXTENSION AND ADVISORY SERVICE WORKERS

Structures generally provide logistic support (cars or motorcycles) to EAS workers so that they can execute their activities. However, logistics are often lacking. The structures involved organize workshops, supervision, field schools and field demonstrations, and provide technical and financial support. For EAS, agents often use brochures (40.2 percent) and posters (43.2 percent). In terms of mass media, radio is the most popular. Extension advisors also give seeds to producers.

3.3.2 Focus group discussions

During the study, FGDs were conducted with crop farmers and livestock keepers to learn about their understanding of nutrition. They revealed that they received general advice on their specific farming activities; however, they did not receive information on nutrition or NSA. The advice was written or drawn for easier comprehension, and provided details on GAP and the use of phytosanitary products for safety and the preservation of health. The respondents indicated that they need training on nutrition because they are aware that good nutrition is essential for health. They recognize the importance of a diversified and balanced diet and that advice on nutrition will contribute to the prevention of conditions such as malnutrition.

REINFORCEMENT OF LEARNING NEEDS

Nutrition capacities should be reinforced through training, with the support of MSHP, MINADER, the Ministry of Animal and Fisheries Resources and international organizations, to ensure that EAS integrate basic aspects of nutrition.

Actors who participated in the validation workshop on the results of this study (ministries, national and international organizations, EAS organizations) recognized that extension workers need training in innovative crop management practices, nutrition advice and the link between agriculture and nutrition. The lack of capacity to integrate nutrition into programmes is primarily due to low awareness among the population. Nutrition was previously couched in terms of calorie intake, to save lives from malnutrition, rather than to improve life. Moreover, production objectives were essentially focused on consumption and marketing and, therefore, the pursuit of profit – goals that were not linked to malnutrition. However, today, food insecurity is one of the main causes of malnutrition. To prevent malnutrition from the ground up, the Government of Côte d'Ivoire has sent strong signals as to the need for agricultural advice that ensures accessibility and, above all, the efficient consumption of food.

To enable workshop participants to respond to the learning needs of agricultural advisors, crop farmers and livestock keepers, further meetings should be organized to collect information on their activities in the field and to consider the declining availability of local products. Nutrition themes should be effectively integrated into EAS programmes, and activities must be monitored. Food could also be analysed according to region, to identify its specific composition and to promote NSA by including specific nutritive crops in cultural systems and diets.

4 CONCLUSIONS AND WAY FORWARD

Nutrition is a broad topic. However, there already exist a number of initiatives and achievements in the field, although they are still conducted on a small scale and with limited synergies and coordination among actors. A National Nutrition Policy was established to address nutrition problems, and many actions have been undertaken in this area by national and international organizations. These include advisory services for rural communities on the importance of balanced diets; nutrition training; aiding women farmers with production, marketing and value addition; promotion of crop diversification; addressing malnutrition; and conducting research on nutrition. However, there is a lack of synergy.

Currently, CONNAPE is attempting to organize actions and create local committees through the PMNDPE, which works with FRANCS to address nutrition in communities. Workers of EAS have developed programmes related to GAP, post-harvest, processing of agricultural products, commercialization, producer income, producer consumption and health protection; however, efforts on a similar scale have yet to be undertaken on nutrition. Farmers and livestock keepers do not yet fully realize that adequate nutrition could be achieved through the missing links between nutrition and agriculture.

The use of EAS to train and sensitize crop farmers and livestock keepers in NSA would be helpful in promoting the need for nutrition sensitivity.

4.1 Way forward: addressing capacity gaps

AT THE ENABLING-ENVIRONMENT LEVEL, ADDRESSING GAPS COULD TAKE THE FORMS OF:

- strengthening capacities for coordinated, multisectoral actions among ministries involved in nutrition;
- setting up platforms bringing together all actors for coordinated action; and
- creating regional committees and FRANCS across the country.

AT THE ORGANIZATIONAL LEVEL, THEY MIGHT INCLUDE:

- increasing both specific and sensitive nutrition activities;
- increasing funds for nutrition; and
- developing training modules (particularly on NSA) and learning materials that are relevant for capacity development and appropriate for staff trainers or other actors involved.

AT THE INDIVIDUAL LEVEL, THESE COULD INCLUDE:

- integrating nutrition training effectively into EAS programmes;
- ownership of nutrition actions by participating in FRANC activities (food diversification, cooking, income generation); and
- supporting farmers and breeders in adopting the advice on nutrition given during training to prevent malnutrition.

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Annex 1. Comments on the methodology and suggestions for improvement

This methodology enables understanding of the national nutritional and agricultural policy context and identification of the international organizations and national structures involved in nutrition. It includes a mapping of all key categories of actors involved in nutrition, agriculture and EAS. The methodology was comprehensive in its evaluation of capacity gaps, particularly at the individual level, which encompassed EAS advisors, crop farmers and livestock keepers. It integrated the triangulation of results through a validation workshop.

However, the methodology is cumbersome to operationalize because it involves working on three capacity levels at the same time, which is a difficult task. A workshop at the beginning of the study to brief all participants should have been organized; this would have helped improve the contributions provided by key informants and resource personnel.

Suggestions for improvement include:

- administering a unified questionnaire to all countries to facilitate data comparisons;
- communicating with stakeholders about the study, to increase participations at all levels (national and international organizations, EAS actors, producers, etc.);
- simplifying the methodology and translating it into an evaluation grid for the global system;
- evaluating the extension workers on their capacities to sensitize and support farmers in designing and using a cropping system that can further contribute to their nutritional needs; and
- conducting the study in pairs, that is, one nutritionist and one EAS expert.

Annex 2. GCNA questionnaire on integrating nutrition into agricultural extension and advisory services

Organizational level

1. Respondent

1. Organization:
2. Service:
3. Function:
4. Years within the organization:
5. Gender: M /___/ F /___/

2. Organizational mandate with respect to nutrition

1. Is nutrition a core mandate of your institution? Yes /___/ No /___/
2. this reflected in the vision, mission, objectives or functions of your organization?
Yes /___/ No /___/
3. If yes, at what level is it stated and how?
.....

3. What programmes or activities on promoting nutrition do you implement?

(Please complete the table here below)

4. Do you have staff deployed in nutritional interventions?

Yes /___/ No /___/

If yes, specify:

1. The category and/or level of staff required:
2. The number of staff:
3. The gender (men or women):
4. Intervention zones:

TABLE A2.1 SPECIFIC PROGRAMMES ON NUTRITION

No.	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
1	Advise rural communities on importance of dietary diversity			
2	Nutrition training (conferences / courses on nutrition)			
3	Nutrition education (formal certificate/ diploma/degree)			
4	Promotion of kitchen gardens			
5	Promotion of school gardens			
6	Distribution of seeds/seedlings/planting material of fruits/vegetables, etc			
7	Organize women farmers to help them with production/marketing/value addition			
8	Promote diversification of crops			
9	Organize food distribution			
10	Conduct research on nutrition			
11	Promote value addition of food			
12	Develop/promote biofortification (process by which the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding or modern biotechnology).			
13	Promote cooking methods that preserve nutrients in fruits and vegetables			
14	Provide supplementary feeding programme to the needy			
15	Organize school feeding programmes			

5. Constraints in programme delivery

1. Do you have enough staf who can efectively design/implement/supervise your nutritional interventions? **Yes /___/ No /___/**
2. If not, what additional staf does your organization need, and at which level?
.....
3. Do staff implementing nutrition programs have sufficient technical knowledge of nutrition? **Yes /___/ No /___/**
4. Who trains the staff on addressing nutrition? (Name the organizations)
5. How often are they trained?
6. How many people are trained on average?
7. Do you think that the training institutions have enough resource persons who can organize quality training on nutrition aspects?
8. What topics are covered in general?
9. Are staff satisfied with extension training? **Yes /___/ No /___/**
10. Are the themes adequate **Yed /___/ No /___/**
11. What are the limitations?
12. Is there a training module on nutrition-sensitive agriculture that is used for staff training? **Yes /___/ No /___/**

6. Operational support for implementing nutrition programmes

1. Does the organization have enough vehicles for staf travel to organize programmes? **Yes /___/ No /___/**
2. If not, do you have the possibility of renting vehicles for travel? **Yes /___/ No /___/**
3. Do feld staf have motorcycles for travel? **Yes /___/ No /___/**
4. Are fuel allowances paid to cover field travel costs? **Yes /___/ No /___/**
5. Has the organization developed learning materials that can be used to educate clients about nutrition? **Yes /___/ No /___/**
6. If yes, what information, communication and education (ICE) materials exist and are used by the staf? Please complete table 2
7. How does the organization provide ICE materials to support staff for use in the field?
.....

7. Partnerships

1. Is the organization working with other organizations in promoting nutrition? **Yes /___/ No /___/**
2. If yes, name the organization(s)?
3. What is the purpose of collaboration?
4. If no, what are the reasons for an independent implementation? (Non-collaboration with other organizations)
5. What needs to change to develop new partners/improve existing partnerships
.....

TABLE A2.2**FREQUENCY OF USE OF INFORMATION, COMMUNICATION AND EDUCATIONAL MATERIALS (ICE)**

No.	ICE materials	Type/category of clients served					Raisons pour non ou utilisation limitée
		Every day	Quite often	Often	Rarely	Never	
A	Printed materials						
1	Brochures ((including leafets/pamphlets)						
2	Posters						
3	Wall calendars						
4	Billboards						
5	Advertisements (posted on public transport vehicles, for example)						
6	Flipcharts						
7	Others						
B	Mass Media						
1	Audio clips						
2	Video clips						
3	Television						
4	Radio						
5	Newspaper						
6	Magazines						
7	Giveaways of seeds						
8	Others						

THANK YOU FOR YOUR COLLABORATION

Annex 3. GCNA questionnaire on integrating nutrition into agricultural extension and advisory services

Agent level

1. Respondent

1. Organization:
2. Service:
3. Function:
4. Years within the organization:
5. Gender: M /___/ F /___/

2. Agricultural and nutritional counselling

- 2.1. What agricultural advisory activities do you carry out?
Support/advice /___/ training /___/ Research development /___/ Intermediaion /___/
Information/group animation /___/ Mass communication (radio, posters, film) /___/
- 2.2. Are these activities carried out within the framework of well-defined programs?
Yes /___/ No /___/
If yes, which ones (cite the programmes):
- 2.3. The contents of these activities (and/or programs) are related to:
- GAP Yes /___/ No /___/
- Post harvest Yes /___/ No /___/
- Processing of agricultural products Yes /___/ No /___/
- Marketing of agricultural products Yes /___/ No /___/
- Producer income Yes /___/ No /___/
- Producer consumption Yes /___/ No /___/
- Producer diets Yes /___/ No /___/
- Sustainable management of the environment Yes /___/ No /___/
- Producer and consumer health protection Yes /___/ No /___/
- 2.4. Do you run a nutritional counseling program?
Yes /___/ No /___/
If yes,
- which one?
- what are the specific activities to do it?
- what are the specific contents?
- what are the particularities of a nutritional advice program compared to an agricultural advice program?
- 2.5. Do you integrate nutritional advice into your agricultural advice programs?
Yes /___/ No /___/
If yes
- What are the advantages?
- What are the disadvantages?
- What are the difficulties encountered?
- 2.6. Would the integration of nutrition in agricultural advice be binding in the work of agricultural advice? Yes /___/ No /___/
- 2.7. Are you motivated to integrate nutrition into your agricultural advisory activities?
Yes /___/ No /___/
- 2.8. What are the advantages of this integration (cite)?
- 2.9. What are the disadvantages of this integration (cite)?
- 2.10. What nutritional counseling assessment instruments are available to you?
- 2.11. Do you think that considering nutrition is important in agricultural advice? Yes /___/ No /___/
- 2.12. Do you know of the country's food and nutrition policy programs and projects? Yes /___/ No /___/
If yes, which ones ? (cite)

- 2.13 Collaborate in the field with the agents of the ministry in charge of food, nutrition and health policies? **Yes /__/ No /__/**
 If yes,
 - what are the benefits of this collaboration?
 - what are the difficulties of this collaboration?
 2.14. What is your operational level?
Design agent /__/ Supervising agent /__/ Executing agent /__/

3. Competencies of the adviser

- 3.1. What is your basic training? (frame)
 - Agriculture Technician (PV)
 - Breeding technique (AP)
 - Rural engineering technician
 - Agro-food processing technician
 - Nutritionist technician
 - Other (quote):
 3.2. Have you ever benefited from refresher training as part of your role as an agricultural adviser?
Yes /__/ No /__/
 If yes:
 - Where did you acquire this knowledge?
 - What are the nutritional topics in which you are most comfortable?

 - Are these themes appropriate in your work area? **Yes /__/ No /__/**
 3.3. Are you aware of any training modules on nutrition sensitive agriculture?
Yes /__/ No /__/
 3.4. Do you need training to better understand the interactions between these themes and nutrition? **Yes No / /**
 If so, list the themes that you consider most important for your area intervention?

4. Operational support for the implementation of nutrition programs

- 4.1. Does the organization have adequate vehicles for your travel to organize the programs?
Yes /__/ No /__/
 4.2. If not, do you have the possibility of renting vehicles for travel?
Yes /__/ No /__/
 4.3. Do you have motorcycles to get around? **Yes /__/ No /__/**
 4.4. Are you paid a fuel allowance to cover your field travel expenses? **Yes /__/ No /__/**
 4.5. Has the organization developed learning materials that can be used to educate clients about nutrition? **Yes /__/ No /__/**
 4.6. If yes, what ICE (Information, Education and Communication) materials do you use? Please complete table 1
 4.7. How does the organization provide you with assistance in the field?

TABLE A3.1.**FREQUENCY OF USE OF INFORMATION, COMMUNICATION AND EDUCATIONAL MATERIALS (ICE)**

No.	ICE materials	Type/category of clients served					Reasons for no or limited use
		Every day	Quite often	Often	Rarely	Never	
A	Printed materials						
1	Brochures ((including leafets/pamphlets)						
2	Posters						
3	Wall calendars						
4	Billboards						
5	Advertisements (posted on public transport vehicles, for example)						
6	Flipcharts						
7	Others						
B	Mass media						
1	Audio clips						
2	Video clips						
3	Television						
4	Radio						
5	Newspaper						
6	Magazines						
7	Giveaways of seeds						
8	Others						

THANK YOU FOR YOUR COLLABORATION

Annex 4. Questionnaire for focus group discussion

1. Introduction of participants
2. What do you do? (For production and breeding, specified type of culture)
3. Do you receive advice on your activities?
4. What do you know about nutrition?
5. Do you receive advice on nutrition?
6. Have you ever heard of nutrition-sensitive agriculture? What do you think about it?
7. What are your expectations concerning advice on nutrition?





With support from
**Federal Ministry
of Food
and Agriculture**

by decision of the
German Bundestag

www.fao.org

ISBN 978-92-5-135969-3



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CB9290EN/1/04.22