

CTA  
Working Paper  
17/09

---

# Building the Evidence Base on the Agricultural Nutrition Nexus: Haiti

Predner Duvivier and Marie  
Lesly Fontin

Series: Agriculture and nutrition





# Building the Evidence Base on the Agricultural Nutrition Nexus: Haiti

Predner Duvivier and Marie Lesly Fontin

Faculté d'Agronomie et de Médecine Vétérinaire, State University of Haiti





## About CTA

The Technical Centre for Agricultural and Rural Cooperation (CTA) is a joint international institution of the African, Caribbean and Pacific (ACP) Group of States and the European Union (EU). Its mission is to advance food security, resilience and inclusive economic growth in Africa, the Caribbean and the Pacific through innovations in sustainable agriculture.

CTA operates under the framework of the Cotonou Agreement and is funded by the EU.

For more information on CTA, visit [www.cta.int](http://www.cta.int).

## About the State University of Haiti

The State University of Haiti is the largest institution of higher education and research of the country, with more than 20,000 students, 1,500 teachers and 800 officers and administrative staff. It is located in Port-au-Prince.

## About CTA Working Papers

CTA's Working Papers present work in progress and preliminary findings and have not been formally peer reviewed. They are published to elicit comments and stimulate discussion. Any opinions expressed are those of the author(s) and do not necessarily reflect the opinions or policies of CTA, donor agencies, or partners. All images remain the sole property of their source and may not be used for any purpose without written permission of the source.



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License. This license applies only to the text portion of this publication.

*Please address comments on this Working Paper to Judith A. Francis, Senior Programme Coordinator, Science and Technology Policy at CTA.*

First published as: CTA/State University of Haiti. 2015. *Building the evidence base on the agricultural nutrition nexus: rapid country scans for informing policy and practice: Haiti*. State University of Haiti, Apia. ISBN 978 982 9003 88 1.

## Table of contents

List of figures	iii
List of tables	iii
List of acronyms	v
Acknowledgements	viii
Abstract	ix
Executive summary	xi
Introduction	1
Tasks of the consultant	1
Methodological framework	2
Collection of information	2
Synthesis and validation of information	6
Results	6
Brief overview	6
Institutions and governance structures in charge of policies	10
Major agricultural and FNS policies and programmes	15
Working together	23
Status of FNS	23
Nutrition education programmes	30
Information and knowledge management	30
Involvement of women's organisations in agriculture and FNS	32
Discussion	32
Conclusion	34
Recommendations	34
References	35
Annex A. Survey questionnaire	37
Annex B: Summary of questionnaire answers	44

## List of figures

Figure 1: Participants of the focus group .....	5
Figure 2: Areas most at risk of food insecurity .....	26
Figure 3: Distribution of chronic malnourishment in Haiti .....	28
Figure 4: Distribution of acute malnourishment in Haiti .....	28

## List of tables

Table 1: List of surveyed institutions .....	4
--	---

<b>Table 2:</b> Distribution of the total land surface according to its use.....	6
<b>Table 3:</b> Demographic characteristics of the household.....	7
<b>Table 4:</b> Ministries and other institutions involved in the implementation of PNSSANH.....	11
<b>Table 5:</b> Components of the strategic actions and ministries and/or institutions in charge ..	17
<b>Table 6:</b> Food balance in 2010 .....	23
<b>Table 7:</b> Characteristics of food insecurity and malnourishment in Haiti.....	25
<b>Table 8:</b> Percentage of food insecure households in the 10 geographic departments.....	29
<b>Table 9:</b> Percentage of food insecure households in the six agro-ecological zones .....	29

## List of acronyms

ACP	Africa, Caribbean and Pacific
AFD	Agence Française de Développement
AGD	Administration Générale des Douanes (General Administration of Customs)
AICA	Association of Irrigants of the Coast of Arcadins
AIPA	Association of Irrigants of the Plains of Arcahaie
AKOSAA	Amelyorasyon Kapasite pou Ogmante Sekirite Alimantè an Ayiti
ASSODLO	Association Haïtienne pour la Maîtrise des Eaux et des Sols (Haitian Association for Water and Soils Management)
BAC	Communal Bureaus of Agriculture)
BMDPP	Bureau de la Ministe Delegee a la Promotion de la Paysannerie (Office of the Delegate Minister for Peasant Promotion)
BMPAD	Bureau de Monétisation des Programmes d'Aide au Développement Office of the Monetization of Development Aid Programs)
CARICOM	Caribbean Community
CISA	Inter-ministerial Council for Food Security)
CNSA	National Coordination of Food Security
COLFAM	National Commission for the Fight Against Hunger and Malnutrition
CTA	Technical Center for Agricultural and Rural Cooperation
DDA	Agricultural Departmental Directorates
DDAS	Agricultural Departmental Directorate in Sud
DIA	Directorate of Agricultural Infrastructure
DSNCRP	Document de Stratégie Nationale pour la Croissance et la Réduction de la Pauvreté (National Strategy Document for Economic Growth and Poverty Reduction)
EU	European Union
FAES	Fonds d'Assistance Economique et Sociale (Economic and Social Assistance Fund)
FAMV	Faculté d'Agronomie et de Medecine Vétérinaire (College of Agriculture and Veterinary Medicine)
FAO	Food and Agriculture Organization of the United Nations
FEWS NET	Famine Early Warning Systems Network
FNS	Food and nutrition security
GAM	Global acute malnutrition
GDP	Gross Domestic Product

HTG	Haitian Gourde
IDB	Inter-American Development Bank
IHSI	Institut Haïtien de Statistiques et d'Informatique (Haitian Institute of Statistics and Informatics)
IICA	Inter-American Institute of Cooperation for Agriculture
MAE	Ministry of Foreign Affairs
MARNDR	Ministry of Agriculture, Natural Resources and Rural Development
MAST	Ministry of Social Affairs and Work
MCDFD	Ministry of Women and Women's Rights
MCI	Ministry of Trade and Industry
MDE	Ministry of Environment
MDG	Millennium Development Goals
MEF	Ministry of Economics and Finance
MENFP	Ministry of National Education and Professional Training
MFK	Meds and Food for Kids
MICT	Ministry of Interior and Territorial Communities
MJSP	Ministry of Justice and Public Safety
MPCE	Ministry of Planning and External Collaboration
MPP	Mouvman Peyizan Papay
MSPP	Ministry of Public Health and Population
MTPTC	Ministry of Public Works, Transportation and Communication
NGO	Non-governmental organisation
ODVA	Organization for the Development of the Artibonite Valley
ONSA	Observatoire National de la Sécurité Alimentaire (National Observatory of Food Security)
PACB	Projet d'Amélioration de la Culture de la Banane (Banana Culture Improvement Project)
PASAH	Programme d'Amélioration de la Sécurité Alimentaire en Haïti (Food Safety Enhancement Program in Haiti)
PFNSA	National Platform of Food Security
PGRF	Program of Rational Management of Fertilizers
PNCS	Programme National de Cantine Scolaire (National School Meals Program)
PNLC	National Program of Artificial Lakes (Programme Nationale des Lacs Collinaire)
PNH	Police Nationale d'Haïti (Haitian National Police)



PNIA	Plan National d'Investissement Agricole (National Plan for Agricultural Investment)
PNN	National Nutrition Policy
PNSAN	Plan National de Sécurité Alimentaire et Nutritionnelle (National Plan for Food and Nutrition Security)
PNSSANH	Politique Nationale de Souveraineté et de Sécurité Alimentaire et Nutritionnelle en Haïti (National Policy of Food Sovereignty and Food and Nutrition Security in Haiti)
SECAL	Sécurité Alimentaire (Food Security Project)
PSF	Programme de Subvention des Fertilisants (Subsidy Program for Fertilizers)
SAM	Severe acute malnutrition
SNS	Service National Semencier (National Seed Service)
SOFA	Solidarité Fanm Ayisyèn
SYFAAH	Système de Financement et d'Assurances Agricoles en Haïti (Financing and Agricultural Insurance System in Haiti)
TEC	Ton equivalent cereal
UEH	Université d'Etat d'Haiti
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Emergency Fund
USAID	United States Agency for International Development
WFP	World Food Programme

## **Acknowledgements**

I am thankful and grateful to CTA, particularly to Ms Judith Francis, for giving me the opportunity to have this great experience. At the Caribbean-Pacific Agri-Food Forum, specialists from different fields had the opportunity to build new capacities and become experts in the agriculture-nutrition nexus. I feel I am part of this family and I am proud of it.

Special thanks go to my colleagues in Haiti who collaborated with me in the realisation of the rapid scan, the organisation of the national workshop, and the finalisation of the report. I would like to particularly mention: Professor Marie Lesly Fontin, Professor Yvens Phylizaire, Agr Neldy Bernard, Francoise Jean-Baptiste, and Mr Daniel Chery.

I would like also to thank all the colleagues from other Caribbean and Pacific Islands and Prof Dr ir D'Haese Luc who kindly shared their knowledge and experience.

## Abstract

This study was carried out in the framework of collaboration with the Technical Centre for Agricultural and Rural Cooperation (CTA) to undertake a rapid scan of policies, programmes, and interventions related to the agriculture-nutrition nexus. A sample of 21 institutions (including four ministries, six universities, four NGOs, six international organisations, and one local organisation) were surveyed, and a literature review and two focus groups were carried out. The results were presented to stakeholders at a national workshop on 2 October 2015 in Port-au-Prince and at the 2nd Caribbean-Pacific Agri-Food Forum in Barbados on 2-6 November 2015.

The Haitian agri-food system faces a variety of challenges, including strong pressure on farmland with small holdings of 0.62 ha on average, limited access to irrigation water, inputs and credit, and a lack of transportation, storage, and processing facilities. National food production covers 55% of food needs, and imports fill most of this gap (51%). Due to unequal and limited food access, food aid usually provides around 3% of food needs. Women are involved in food production, marketing, processing and food preparation.

Of the 10.5 million population 38% is food insecure, and children under 5 years are affected by chronic malnutrition (23.44%), severe chronic malnutrition (7.1%), global acute malnutrition (GAM) (4.10%), severe acute malnutrition (SAM) (1%), and anaemia (70%). Iron deficiency anaemia affects 50% of pregnant women, while 70% of 6-12 month olds suffer from iodine deficiency. Consumers are poorly educated on nutrition.

There is no specific legal framework for food and nutrition security (FNS). The Ministry of Agriculture, Natural Resources and Rural Development (MARNDR) is the main institution in charge of addressing FNS. The Ministry of Public Health and Population (MSPP) is responsible for nutrition-related services. International organisations act as donors and NGOs implement FNS related programmes and projects, while universities carry out research projects and provide expertise services. Implemented interventions have impacts in targeted areas and for specific target populations, but they are too limited to have significant impacts at a national level.

To improve FNS, more investment in agriculture and nutrition services are needed. Farmers particularly need greater access to credits, agricultural insurance, agricultural extension and education, irrigation water, and inputs (seeds, pesticides, and fertilisers). Farmland reform, including farm consolidation, is necessary for farmers to gain greater production capacity and attract investment, and smallholder farmers must be brought together into associations. In addition to classical technical approaches for FNS, a legal approach is also needed. To strengthen the agriculture-nutrition nexus, all initiatives must consider nutrition needs, and data on nutritional status must be collected and used as indicators to track progress.



## Executive summary

This study was carried out in Haiti from June to September 2015 by the University of Haiti's (Université d'Etat d'Haiti, UEH) College of Agriculture and Veterinary Medicine (Faculté d'Agronomie et de Médecine Vétérinaire, FAMV), in the framework of collaboration with the Technical Centre for Agricultural and Rural Cooperation (CTA), to undertake a rapid scan of policies, programmes, and interventions related to the agriculture-nutrition nexus.

To collect information, 27 institutions (including five ministries, six universities, five non-governmental organisations (NGOs), eight international organisations, two women's organisations, and one local organisation) were selected for a survey and two focus groups were planned with beneficiaries of NGO interventions. Out of these, 21 (including four ministries, six universities, 4 NGOs, six international organisations, and one local organisation) participated and both focus groups were carried out. These surveys enabled an inventory to be created of governance structures working in agriculture and food and nutrition security (FNS), as well as policies, programmes and interventions related to FNS in Haiti. To complete the information, publications relevant to the subject were collected and synthesised. The results were presented to stakeholders at a national workshop held on 2 October 2015 at Le Plaza Hotel in Port-au-Prince, and at the 2nd Caribbean Pacific Agri-Food Forum held in Barbados on 2-6 November 2015.

The Republic of Haiti occupies the western side of the island it shares with the Dominican Republic. The island is located in the Caribbean, with the Atlantic Ocean to the north and the Caribbean Sea to the south. It is administratively divided into 10 geographic departments (Artibonite, Centre, Grande-Anse, Nippes, Nord, Nord-Est, Nord-Ouest, Ouest, Sud, and Sud-Est), 140 communes and 565 communal sections. Haiti has an area of 27,750 km<sup>2</sup> (2,775,000 ha). The capital city, Port-au-Prince, forms a large metropolitan urban area which has expanded to include neighbouring urban areas (Delmas, Pétion-Ville, Carrefour, Croix-des-Bouquets, and Tabarre). High sloping mountains (slope >40%) that are not suitable for agriculture but are suitable for forestry make up 50% of the territory. The rest of Haiti consists of low sloping mountains and plateaus (slope 10-40%) suitable for agriculture if sustainable techniques are used (22%), coastal plains and valleys with potential for agriculture when irrigated (28%), and forest cover (less than 2%). Agro-ecologic zones are diverse and include dry plains, irrigated plains, semi-humid mountains, and rainy humid mountains and plateaus.

The total population is approximately 10.5 million (FEWS NET, 2014), which corresponds to a population density of 378 people/km<sup>2</sup>. On average, households contain six people in rural areas, 4.6 people in metropolitan areas of Port-au-Prince, and 5.9 people in other cities. Approximately 60% of the population lives in rural area and practices agriculture, and of these 55% practice animal husbandry and 3% practice fishery.

Agriculture, including animal husbandry, fisheries and forestry exploitation, contributes about a quarter of Haiti's annual GDP. However, the sector faces many challenges, including small land parcels, overexploitation of soils and water, and forest degradation. Less than 30% of farmers use fertilisers, despite the government providing financial support for these inputs of up to 80% since 2008. Only about 10% of farmers have access to irrigation water and the rest depend on rainfall which results in low crop yields. Natural disasters (hurricanes,

flooding, droughts) occur frequently and some areas of the country are particularly vulnerable.

The main crops are:

- cereals: rice (*Oryza sativa* L.), maize (*Zea mays* L.), and sorghum (*Sorghum vulgare* L.);
- roots and tubers: yam (*Dioscorea* sp.), yucca (*Manihot esculenta* L.), sweet potato (*Ipomea batatas* L.), and potato (*Solanum tuberosum* L.);
- bananas (*Musa sapientum* L.) and plantains (*Musa paradisiaca* L.);
- legumes: common bean (*Phaseolus vulgaris* L.), pigeon pea (*Cajanus cajan* L.), and other bean varieties (*phaseolus Lunatus* L, and *Vigna unguiculata* L.);
- vegetables: cabbage (*Brassica oleacera* L.), pepper (*Capsicum annuum* L.), onion (*Allium cepa* L.), and carrot (*Daucus carota* L.);

The main livestock species are horses, donkeys, mules, chickens, ducks, turkeys, pigeons, pigs, sheep, goats, and cattle. Yet overall numbers of livestock is very small. Haiti has good fishery potential with 1,770 km of coastline and 22,000 ha of water bodies. Fish production is about 16 000 t/year, of which 400 t is from aquaculture. National food production covers approximately 55% of food needs, and imports fill most of this gap (51%). Due to limited food access, food aid usually provides around 3% of food needs.

Between 2007 and 2008, the level of unemployment nationally was estimated to be 41% by the Haitian Institute of Statistics and Informatics (Institut Haïtien de Statistiques et d'Informatique, IHSI), with unemployment varying between 52% in the metropolitan area of Port-au-Prince, and 47% in other cities and 34% in rural areas. Over half of the population (56%) lives in extreme poverty on less than US\$1 per person per day, and another 19% lives in moderate poverty on less than US\$2 per person per day, which means 75% live in poverty. The percentage of poor people is higher in rural areas (88%) than in urban areas, with 45% of people living in poverty in the metropolitan region of Port-au-Prince and 76% in other cities.

Nationally, households spend 65% of their income on foods, 10% on education and 3% on healthcare. The total average expenses per person per month are 2,396 Haitian Gourde<sup>1</sup> (HTG). Food expenses are divided between cereals (26%, of which 21% is for rice), legumes, roots, and tubers (10%), meat and fish (13%), milk and dairy products (4%), oils and fats (8%) and fruits and vegetables (4%).

The Ministry of Planning and External Cooperation (MPCE) oversees national economic and social development plans, and oversees planning systems to optimise available funds. The Ministry of Agriculture, Natural Resources and Rural Development (MARNDR) is the main institution responsible for food security. Via its structures, in particular the National Coordination of Food Security (CNSA), MARNDR elaborates and implements related policies and programmes. CNSA also establishes and operates the National Observatory of Food Security (Observatoire National de la Sécurité Alimentaire, ONSA), working in close collaboration with several governmental institutions such as, the Ministry of Public Health and Population (MSPP) for nutritional aspects, the Ministry of National Education and Professional Training (MENFP), the Ministry of Trade and Industry (MCI), MPCE, the

---

<sup>1</sup> US\$1 = HTG50–60

Ministry of Economics and Finance (MEF), the Ministry of Foreign Affairs (MAE), the Ministry of Interior and Territorial Communities (MICT), the Ministry of Environment (MDE), and the Ministry of Public Works, Transportation and Communication (MTPTC). The Prime Minister's Office, which coordinates government actions, is also involved.

MARNDR benefits from the support of many international donors, including the World Food Programme (WFP), Inter-American Development Bank (IDB), World Bank, Caribbean Community (CARICOM), European Union (EU), Agence Française de Développement (AFD), United States Agency for International Development (USAID), Food and Agriculture Organization of the United Nations (FAO), United Nations Development Programme (UNDP), Organization of American States, United Nations Children's Emergency Fund (UNICEF), United Nations Educational, Scientific and Cultural Organization (UNESCO), and Inter-American Institute of Cooperation for Agriculture (IICA).

Projects and interventions related to national policies are implemented by MARNDR structures, in particular the Directorate of Agricultural Infrastructure (DIA), Subsidy Program for Fertilizers (Programme de Subvention des Fertilisants, PSF), Program of Rational Management of Fertilizers (PGRF), National Seed Service (Service National Semencier, SNS), and Agricultural Departmental Directorates (DDA). Many NGOs and private service structures are also involved in implementing the policies, while universities implement research projects and provide expert services (laboratory analysis and studies).

The main policies addressing agriculture and FNS in Haiti usually also address extreme poverty, environment, and incomes at the same time. The most recent related policies in chronological order are:

- The National Plan for Food and Nutrition Security (Plan National de Sécurité Alimentaire et Nutritionnelle, PNSAN), executed by CNSA for the Inter-ministerial Council for Food Security (CISA), was established in 1996 and updated in 2010. Its objective was to cut the number of people suffering from food insecurity and malnourishment in half by 2015, aligning with the Millennium Development Goals (MDG) and the National Strategy Document for Economic Growth and Poverty Reduction (Document de Stratégie Nationale pour la Croissance et la Réduction de la Pauvreté, DSNCRP) in Haiti.
- The DSNCRP, created by MPCE in November 2007, aims to boost economic growth and reduce poverty.
- The National Plan for Agricultural Investment (Plan National d'Investissement Agricole, PNIA) was implemented by MARNDR in May 2010, to boost the development of rural infrastructures (watershed protection and irrigation), production, value chains, agricultural services and institutional support.
- The National Nutrition Policy (PNN), established by MSPP in January 2012, aims to improve the nutrition and health status of the population, in particular of pregnant women, nursing women, and children under 5 years old who are considered vulnerable groups.
- The Plan Stratégique de Développement d'Haiti (Strategic Plan for the Development of Haiti) was implemented by MPCE in May 2012 to boost economic growth, reduce poverty, strengthen the middle class, social justice, and security.
- The 2013-2016 Programme Triennal de Relance Agricole (Triennial Agricultural Recovery Program), established by MARNDR in March 2013, is working to improve food security and economic growth in Haiti.

- The National Policy of Food Sovereignty and Food and Nutrition Security in Haiti (Politique Nationale de Souveraineté et de Sécurité Alimentaire et Nutritionnelle en Haïti, PNSSANH) was created in February 2015 under the leadership of the Prime Minister to guarantee food sovereignty and FNS.

PNSSANH has 15 strategic actions which are being implemented by 14 ministries and related structures. The strategic actions are: an agricultural recovery plan; creation of a national fund for food sovereignty and security; boost the supply of five strategic food commodities; reinforce border controls to prevent cheaper agricultural products being smuggled; rationalise the customs system; create reserves of the five strategic food commodities; implement agricultural insurance (against natural disasters, robbery); establish national monitoring of food prices; establish a cabotage system for the distribution of food and petroleum products; establish local structures to purchase agricultural commodities; define and distribute roles and responsibilities among market actors; establish regulations along the value chain regarding the production and trade of food; programme of social security (EDE PEP, ti manman cheri, kore fanmi, kore etidyan, etc.); develop the National Nutrition Program; oblige public institutions (health institutions, National School Meals Program (Programme National de Cantine Scolaire, PNCS), ministries) to purchase at least 50% of their food from local producers. Each strategic action consists of one or more components (programmes, projects or interventions) and some provide incentives to encourage implementation.

Among the strategic actions, the agricultural recovery plan is of particular importance because it is designed to increase national food production and improve farmer incomes. The main project under the agricultural recovery plan is the 2013-2017 Food Security Project (Sécurité Alimentaire, SECAL) which focuses on three departments (Saint-Marc in Artibonite, Cabaret and Acahaie/Montrouis in Ouest, and Cam Perrin in Sud). SECAL provides irrigation infrastructure, seeds, agricultural research, technical assistance and subsidies to farmers and livestock producers. Priority food commodities are maize, beans, plantains, eggs and chicken. Objectives are to increase and improve production, preservation, processing and marketing of agricultural products. SECAL also supplies food to PNCS via WFP, and provides technical support and capacity building to stakeholder in the maize and bean value chains.

Including SECAL, the other main projects being implemented under PNSSANH include PSF, PNCS, and the Subsidy Program for Seed. Under PSF, MARNDR works in collaboration with private traders, namely COMAG S.A., Agro Service S.A., Darbouco S.A., and Rimbold Import Export. PNCS activities are implemented by WFP in collaboration with different ministries, including MARNDR (which coordinates the programme) and MENFP. As part of the programme, 1.5 million children are being fed at school, with the target being to reach 3 million.

Despite the range of projects and programmes involved in FNS, areas of intervention are restricted so impacts are limited. Interventions therefore need to be increased, and while existing programmes focus on production to provide energy macronutrients (carbohydrate, proteins, and lipids), micronutrients do not receive enough attention.

Some platforms exist to ensure that different actors involved across various FNS interventions work together. At government level, different actors (ministries) meet on a



regular basis through a platform called the Table of Concertation. Inside MARNDR, different structures meet together through a platform called the Sectorial Table to distribute roles to different structures and avoid duplication and conflict. Many NGOs, however, operate in Haiti in the sectors of agriculture and FNS, sometimes with no agreement from the authorities. Although there are currently 164 NGOs with government agreement, their activities do not necessarily match national food security plans.

Of the 10.5 million population 38% is food insecure, of which 29.9% face moderate food insecurity and 8.1% suffer from severe food insecurity. The level of food insecurity is higher in rural areas (49.6% of households) than in urban metropolitan areas of Port-au-Prince (39.9% of households) and other cities (34.6% of households). These results suggest that farmers do not produce enough to ensure their own food security.

The level of food insecurity varies largely between geographic departments. The proportion of households suffering food insecurity exceeds the national average of 38% in three departments: Artibonite (54.9%), Nord-Ouest (46.1%), and Sud (41.1%). Food insecurity is lower in Nord (28.9%), Nord-Est (30.5%), Nippes (30.7%), Grande-Anse (32.7%), Ouest (34%), and Centre (34%). Communities considered most at risk of food insecurity in 2013-2014 were Bombardopolis and Baie de Henne in the department of Nord-Ouest, Anse-Rouge in Artibonite, and Jacmel and Bainet in Sud-Est. Hungry or malnourished people are mainly located in vulnerable communities in the departments of Nord-Ouest, Sud-Est (Belle Anse district), Ouest (La Gonave Island), Artibonite and Centre.

Groups most at risk of food insecurity include widows, young children, people displaced by the 2010 earthquake, households with adults unable to work (due to disability, disease or trauma) or households with more than seven members and only one adult able to work, and households headed by widows or children.

The problem of food insecurity in Haiti is not a question of availability because the food balance sheet is usually positive (5.6% in 2005, 15% in 2007, and 13.72% in 2010). This situation however is fragile due to the large share of imports (44%). Food access seems to be the main factor leading to food insecurity as high levels of poverty mean that households often cannot afford to purchase the food they require. In 2001, half of the population did not have access to the minimum ration of 225 kg of cereal per year. Only 30% of the population eats three meals a day and 59% eat two meals a day, with the rest (11%) eating less than two.

Food utilisation may also play a role in food insecurity. Food habits in Haiti are affected by taboos; some plant and animal species that are consumed by some cultures are shunned in Haiti.

The Haitian people also live in an unstable environment making them vulnerable to food insecurity. Risks include household shocks (death of a household member, disease, unemployment), price volatility, epidemics, uncertainty of agricultural production, plant diseases, animal diseases, natural disasters (cyclones, flooding, and drought), and political instability.

A large proportion of children under 5 years old (23.44%) are affected by chronic malnourishment with three departments having a higher proportion than the national average: Nord-Ouest (32.9%), Grande-Anse (27.6%), and Nord-Est (27%). The less affected

areas are the metropolitan areas of Port-au-Prince in Ouest (16.4%), Centre (21.3%) and Sud (22.9%). Severe chronic malnourishment affects 7.1% children under 5 years old.

A significant proportion (4.1%) of children under 5 years old are affected by global acute malnourishment (GAM). The most affected departments are Nord-Est (6.7%), Sud-Est (5.8%) and Nord (5.5%), while the less affected are Sud (1.9%), Centre (2.4%), and Nord-Ouest (2.8%). Severe acute malnourishment (SAM) affects 1% of children under 5 years old. Anaemia affects 50% of pregnant women and 70% of the under children under 5 years old. Iodine deficiency affects 70% of 6-12 month olds.

Consumers are currently poorly educated on nutrition. The Directorate of Nutrition, within MSPP, is in charge of nutrition education, while international organisations, local organisations and NGOs also contribute. Nutrition education is part of the primary school curriculum in Haiti. Nutrition education programmes focus on different groups of foods, the nutrients they provide for the body and the importance of having a balanced diet.

Communication of nutrition information is mainly carried out by health personnel in MSPP facilities. The key messages are managed by MSPP Directorate of Nutrition, and communicated through health structures and radio broadcasts. For adults, some radio stations broadcast health and nutrition education, but these rarely gain government support. These radio messages often focus on the use or non-use of different food for health reasons. Cultural aspects of food consumption are important but are rarely considered. In Haitian culture, women are the main decision-makers when it comes to purchasing and preparing food, so benefit from nutrition education and cooking training. Men generally make the decisions about agricultural production and income generation.

Meetings between MARNDR technicians and farmers are a key communication method. Important messages on agriculture are usually managed and communicated by MARNDR extension services, however these services are weak. MARNDR structures involved in the collection and management of information include CNSA, DDAs, Organization for the Development of the Artibonite Valley (ODVA), and Communal Bureaus of Agriculture (BAC).

Other communication channels for agriculture and nutrition include TV, newspapers, press releases, technical reports and publications, alerts, websites, emails, individual meetings with authorities or donors, and *ad hoc* presentations or interventions during meetings. Websites which explain the food security situation at a national level include those belonging to CNSA and Famine Early Warning Systems Network (FEWS NET).

Changes in dietary patterns have occurred over the years, but they are not well documented and monitored. Information about agriculture and nutrition is collected and organised by a group of institutions including MARNDR, MSPP, MPCE, MDE, MCI, the General Administration of Customs (Administration Générale des Douanes, AGD), and IHSI.

Women are present in agricultural production, food processing, and commercialisation. Their role in agriculture and food trade is important, and despite some de-feminisation of certain tasks in agriculture, their presence is noticeable. Their activities have a direct and important role on the food security of their families.

There are two major women's organisations in the country: Solidarité Fanm Ayisyèn (SOFA) and Fanm yo la. They are very active in social and political matters, but they are not involved

in policies, programmes and projects addressing FNS. They could play an important role, but they need to be motivated and trained on these issues.

In conclusion, Haitian authorities have developed and implemented policies, programmes and projects to address food insecurity, but 38% of the population is still food insecure. Although 60% of the population are involved in agriculture, the sector only produces about 55% of the food the country requires and farmers tend to be poorer than people living in cities. The food balance sheet is positive, but the proportion of food insecure people is high, so food insecurity is more a problem of food access than food availability. Utilisation of food is also limited by food habits, religious norms, culture and stigmas.

A multi-stakeholder, multi-disciplinary, inter-sectoral, and inter-ministerial partnership to improve FNS outcomes at a national level is necessary. A platform involving different ministries exists, and while their actions are positive, the projects and programmes need to be scaled up. Consensus among actors is required to develop secondary and tertiary economic sectors in parallel with the agriculture sector, decrease pressure on agricultural land, increase farm sizes, and reinforce the purchasing power of consumers. Farmers need access to credit, agricultural insurance, agricultural extension and education, irrigation water, and inputs (seeds, pesticides, and fertilisers). Small farmers should be organised into associations to increase investment, production, and capacity to advocate. Considering the absence of specific laws and regulations a judicial approach is also necessary in addressing FNS.



## Introduction

A contract linking the consultant through the University of Haiti's (Université d'Etat d'Haiti, UEH) College of Agriculture and Veterinary Medicine (Faculté d'Agronomie et de Médecine Vétérinaire, FAMV) with the Technical Centre for Agricultural and Rural Cooperation (CTA) led to a rapid scan of policies, programmes, and interventions related to the agriculture-nutrition nexus in Haiti. This rapid scan identified:

- Major actors and target groups;
- Competencies in nutrition linked to addressing the FNS situation; and
- Lessons to formulate guidelines for improving FNS outcomes and strengthening the agriculture-nutrition nexus.

CTA works to generate context-specific knowledge to inform policy processes and develop and implement strategies and programmes in support of the attainment of food and nutrition security (FNS). Hence, CTA aims to document and share lessons learned with policymakers, researchers, farmers and other key stakeholders working to achieve FNS outcomes in Africa, Caribbean and Pacific (ACP) states. Since 2013, CTA has identified the following key areas:

- Identifying, documenting, and promoting successful interventions, such as the uptake and scaling-out of research outputs and social and technological innovation, and supportive policies.
- Advocating for greater investments in science and innovation, including higher education, to increase productivity, marketing opportunities, consumption and value addition of locally available diverse, nutrient-dense foods, and build resilience of agri-food systems.
- Strengthening the linkages between agriculture and nutrition.

## Tasks of the consultant

This report is an output of one of the consultant's tasks as indicated in the terms of reference:

- Develop a methodological framework for undertaking a rapid scan of policies, programmes, and interventions (projects) linked to improving agriculture, food and nutrition outcomes, and FNS in Haiti.
- Undertake the rapid scan after approval of the methodological framework.
- Produce a report which details the results of the rapid scan and an assessment of their potential for improving food and nutrition outcomes and strengthening the agriculture-nutrition nexus.

# Methodological framework

## Collection of information

To collect information, 27 institutions (including five ministries, six universities, five NGOs, eight international organisations, two women's organisations, and one local organisation) were selected for a survey and two focus groups were planned with beneficiaries NGO interventions. Out of these, 21 (including four ministries, six international organisations, six universities, four NGOs, and one local organisation) participated and both focus groups were carried out. Research departments of government ministries and universities were surveyed separately. Table 1 contains a detailed list of the surveyed institutions.

Information was collected/generated on agriculture and food and nutrition outcomes in Haiti in order to identify entry points to strengthening the agriculture-nutrition nexus. Answers to the following key questions were sought:

### 1) Targeting questions

- Are there existing policies, and agriculture/nutrition programmes?
- If yes, what are the major goals and objectives of these policies?
- Are there any incentives for the implementation of these policies?
- Are specific groups targeted (examples: women, children under 5 years)?
- If yes, are they targeted separately or as part of a larger group (examples: household, mother and children, etc.)? How?

### 2) Institutional framework questions

- What are the existing governance structures (organisation, institution) working on FNS, agriculture/nutrition? What are the linkages between/among them?

### 3) Nutrition education/knowledge questions

- Is there a special unit in charge of nutrition education?
- If yes, where is it located? In a ministry or in a university? Which one of the ministries/universities?
- If nutrition education services exist, do women have access to them? Are there any categories of the population which don't have access to these services?
- Is consideration given to the cultural context of food/dietary intake and nutrition in providing these services? For example, what is known about food preferences, prejudices, stigma, etc.? Have dietary patterns changed over the years? If yes, are these changes monitored/documented?
- What is known about women's decision-making power regarding agricultural production? Regarding food purchasing? Regarding food distribution? Regarding income generation within the home?

### 4) Information and knowledge management questions

- How are key messages on agriculture and nutrition communicated?
- Who is in charge of communicating these messages?

### 5) Women's empowerment questions

- What are the major women's organisations involved in the development and implementation of agriculture and food and nutrition programmes?
- What kind of involvement? Conception? Development? Search of funds? Funding? Implementation? Supervision? Others?
- Are there any opportunities to increase their engagement in future programmes or projects aimed at strengthening the agriculture-nutrition nexus?

#### 6) Overall questions

- What are the priority interventions for improving FNS outcomes in the country/community?
- What are the main characteristics of agri-food systems?
- What are food/dietary intake and nutrition indicators?
- What is the link between agri-food systems and food/dietary intake and nutrition indicators?
- What are the gaps and how can they be improved?
- What are the existing models/best practices that benefit smallholder farmers, especially women, and how can they contribute to improving incomes, food/dietary intake and nutrition outcomes?
- What are the best practices for building multi-stakeholder, multi-disciplinary, inter-sectoral, and inter-ministerial cooperation and partnerships for improving FNS outcomes at national level and for informing global processes?
- Is there any issue at level of good governance, national ownership and women's empowerment related to FNS outcomes?

The above questions were organised in a questionnaire with spaces for 36 answers (see Annex B).

**Table 1:** List of surveyed institutions

Ministries	Universities	International organisations	NGOs	Women organisations	Local organisations
Ministry of Agriculture, Natural Resources and Rural Development (MARNDR)	<b>Université Notre Dame d'Haïti</b>	European Union (EU)	Meds and Food for Kids (MFK)	<b>Solidarité Fanm Ayisyèn (SOFA)</b>	Mouvman Peyizan Papay (MPP)
Ministry of Public Health and Population (MSPP)	Université d'Etat d'Haïti (UEH)	Food and Agriculture Organization of the United Nations (FAO)	<b>Haitian Association for Water and Soils Management (Association Haïtienne pour la Maîtrise des Eaux et des Sols, ASSODLO)</b>	Fanm yo la	
<b>Ministry of Social Affairs and Work (MAST)</b>	Université Quisqueya	United Nations Children's Emergency Fund (UNICEF)	Concertation		
Ministry of Trade and Industry (MCI)	Université Caraïbes	<b>United States Agency for International Development (USAID)</b>	PRODEVA		
Ministry of Women and Women's Rights (MCFDF)	Université Episcopale d'Haïti	Inter-American Development Bank (IDB)	Oxfam America		
	University Laval (project in Haiti)	Inter-American Institute of Cooperation for Agriculture (IICA)			
		United Nations Development Programme (UNDP)			
		<b>World Food Programme (WFP)</b>			

Note: The institutions in bold did not participate in the survey





**Figure 1:** Participants of the focus group

Figure 1 is a picture taken during a focus group in Papaille (Hinche, Department of Centre Department) with some members of the peasant association, Mouvman Peyizan Papay (MPP).

### **Steps to generate the desired information**

#### *Institution surveys and focus groups*

During the institution survey, an inventory of governance structures working in agriculture and FNS was realised, as well an inventory of the policies, programmes and interventions related to FNS.

- Inventory of governance structures working in agriculture and FNS

The Ministry of Agriculture, Natural Resources and Rural Development (MARNDR) and the Ministry of Public Health and Population (MSPP) provided information about relevant structures and partner institutions linked to the subject. MARNDR was more involved in food production and food security, while MSPP was more involved in nutrition security. MARNDR and MSPP were asked whether nutrition governed the choices of any of the actors in agricultural interventions.

- Inventory of policies, programmes and intervention related to FNS

An inventory of the policies, programmes and interventions linked FNS, improving agriculture, and food and nutrition outcomes in Haiti was achieved. MARNDR, MSPP and their relevant structures and partner institutions provided information, including about the geographical areas of intervention and reasons why these locations were

chosen, as well as priority target groups they work with and the reasons for these choices. This provided an overview about what is being done to promote FNS, where it is being done, and what the results are. It also highlighted the most at risk communities, the major pockets of malnutrition, and the underlying reasons.

### *Literature review*

National and sectoral publications relevant to the subject were collected and synthesised. The institution survey was helpful for collecting institution's internal documents. A list of documents that were consulted is provided at the end of this report.

### *Capitalisation of personal non-documented information*

Some information known by almost everybody, but not necessarily documented was capitalised.

## **Synthesis and validation of information**

The information collected was synthesised (see Results) and presented to representatives of the surveyed institutions and other stakeholders during the 1-day national workshop on 2 October 2015 for validation, and the 2nd Caribbean Pacific Agri-Food Forum held in Barbados on 2-6 November 2015. Commentaries and suggestions of participants were taken into consideration when writing this report.

## **Results**

### **Brief overview**

#### **Country location and size**

Republic of Haiti occupies the western side of the island it shares with the Dominican Republic. The island is located in the Caribbean, with the Atlantic Ocean to the north and the Caribbean Sea to the south. Its neighbours are Cuba to the north-west, Jamaica to the south-west, and Puerto Rico to the east. It is administratively divided into 10 geographic departments (Artibonite, Centre, Grande-Anse, Nippes, Nord, Nord-Est, Nord-Ouest, Ouest, Sud and Sud-Est), 140 communes and 565 communal sections. Haiti has an area of 27,750 km<sup>2</sup> (2,775,000 ha). High sloping mountains (slope >40%) that are not suitable for agriculture but are suitable for forestry make up 50% of the territory (CNSA, 2010). The rest of Haiti consists of low sloping mountains and plateaus (slope between 10 and 40%) suitable for agriculture if sustainable techniques are practiced (22%), and coastal plains and valleys (28%) with potential for agriculture when irrigated (Table 2). Approximately, 1.5 million ha of land (55% of the total surface) is under agriculture.

**Table 2:** Distribution of the total land surface according to its use

Land	Slope	Surface area (ha)	Percentage of the total	Remark
Plains and valleys	<10%	770,000	28%	Suitable for agriculture
Plateaus and low	10-40%	605,000	22%	Arable production if sustainable

sloping mountains				techniques are used
High sloping mountains	>40%	1,400,000	50%	Not suitable for agriculture, but suitable for forest
Total		2,775,000	100%	

Source: CNSA, 2010

## Demographics

The population of Haiti stands at about 10.5 million (FEWS NET, 2014), which corresponds to a population density of 378.38 people per km<sup>2</sup>. Approximately 60% of the population lives in rural area and practices agriculture, animal husbandry or fisheries. In rural areas, most household heads (58%) are men (CNSA, 2011). In contrast, in urban areas, the majority of household heads are women, with 56% in the metropolitan areas of Port-au-Prince and 53% in other cities (Table 3). Heads of households are on average older in rural areas (48 years) than in metropolitan areas of Port-au-Prince (41 years) and other cities (48 years). Similarly, the household size is larger in rural areas (6 people) than in metropolitan areas of Port-au-Prince (4.6 people) and other cities (5.9 people).

**Table 3:** Demographic characteristics of the household

Area	Proportion of male household heads (%)	Proportion of female household heads (%)	Average age of the household head (years)	Average number of people per household
Rural area	58	42	48	6.03
Metropolitan areas of Port-au-Prince	44	56	41	4.81
Other cities	47	53	45	5.93
National average	54	46	45	5.8

Source: CNSA, 2011

In rural areas, 40% of household heads are illiterate versus 10% in cities. However, about 83% of 6-14 year old children go to school. The human development index in Haiti was established at 0.454 in 2011, ranking it at 158th among 181 countries. In 2011, the GDP was US\$7.34 billion and the GDP per person was US\$725. Most families (80%) own their own house and the main sources of energy used are kerosene for lighting (63%) and wood for cooking (96%).

## Agriculture

Agriculture is an important economic sector in Haiti. The sector, including animal husbandry, fisheries, and forestry exploitation, contributes about a quarter of Haiti's annual GDP (MARNDP, 2013a). Agriculture is the main source of income for about a third of the population, but 60% are involved in the sector to some extent. The size of farms is small, with about 0.62 ha divided into an average of three plots (CNSA, 2011), so that pressure on the agricultural land is high. Land is also overexploited due to soil, water, and forest

degradation. Most of the land, 63-79% of plots, are overexploited. Less than 30% of farmers use fertilisers, despite the government providing financial support for these inputs of up to 80% since 2008. Only about 10% of farmers have access to irrigation water, and the rest depend on rainfall. CNSA) divided rural areas into six groups according to their agro-ecological characteristics:

- dry agricultural and fishery zones;
- dry agro-pastoral zones;
- semi-humid agro-pastoral zones;
- agro-pastoral plateaus;
- irrigated plains practicing mono-crop agriculture; and
- humid mountains.

The main crops are:

- Cereals: rice in irrigated lowlands; maize in irrigated and non-irrigated low lands, and humid and dry mountains; sorghum in dry low and highlands.
- Roots and tubers: yam in humid and semi-humid mountains; yucca and sweet potato in dry and humid, low and high lands; and potato in high humid mountains.
- Bananas and plantain in irrigated plains and humid mountains.
- Legumes: common bean, pigeon pea, and other beans.
- Vegetables: cabbage, pepper, onion, carrot, and leek.

Agriculture in Haiti faces a lot of challenges, including:

- low crop yields;
- recurrence of natural disasters (in particular cyclones, flooding, droughts), particularly in certain vulnerable areas;
- poor management of irrigation infrastructure and water resources;
- accelerated urbanisation of irrigated or dry plains;
- limited access to agricultural inputs and equipment;
- land conflicts in some areas of the country, and insecure land tenure;
- small farm sizes;
- underdeveloped financial systems in rural areas that are not really suited to the needs of farmers;
- deficiency of agricultural research and technical support;
- deficiency of agricultural extension and education (MARNDP, 2011b)
- deficiency of agricultural and rural infrastructure, including irrigation and drainage infrastructure, roads, storage facilities, and processing structures;
- low investment in the sector in general (5.3% of the investment budget in 2010-2011) and particularly in the sub-sectors of livestock and fisheries;
- low availability of animal feeds;
- low performance of local plant and animal genetic resources;
- plant and animal pests and diseases;
- lack of epidemiological control, regular campaign prophylaxis and health monitoring for livestock;
- high level of post-harvest losses;
- lack of standards and quality control systems;

- excessive market liberalisation in agricultural products (low tariffs, elimination of quantitative restrictions); and
- unfavourable fiscal policy, devoting few public resources to agriculture.

Access to agricultural inputs (fertilisers, pesticides and seeds) is limited. Farmers usually select their seeds from their own harvest, except for some vegetable crops such as cabbage, carrot, onion, peppers, and red beet. After a poor harvest many farmers often buy seed from the market, but the quality is very poor. There is no access to credit for most farmers.

Approximately 55% of the population practice animal production (CNSA, 2011). The main livestock species that are raised are: horses, donkeys, mules, chickens, ducks, turkeys, pigeons, pigs, sheep, goats, and cattle. Most households only keep a few livestock (about five birds, two goats, one pig, one sheep, one cow and one horse, ass or mule). Animal diseases and pests, robbery, lack of feed, and non-availability of services also affects the livestock sector. Haiti has good fishery potential with 1,770 km of coastline and 22,000 ha of water bodies. About 3% of the population practice fisheries, however fish production is low at about 16,000 t/year, of which 400 t is from aquaculture. Due to low production, Haiti imports fish and other seafood.

### **Employment and poverty**

Between 2007 and 2008, the level of unemployment nationally was estimated to be 41% by the Haitian Institute of Statistics and Informatics (Institut Haïtien de Statistiques et d'Informatique, IHSI), with unemployment varying between 52% in metropolitan areas of Port-au-Prince, and 47% in other cities and 34% in rural areas. Over half of the population (56%) lives in extreme poverty on less than US\$1 per person per day, and another 19% live in moderate poverty on less than US\$2 per person per day, which means 75% live in poverty. Levels of extreme poverty is higher in rural areas (58%) compared to urban area (20% in metropolitan areas of Port-au-Prince). The percentage of poor people is higher in rural areas (88%) than in urban areas, with 45% of people in the metropolitan areas of Port-au-Prince living in poverty, and 76% in other cities (CNSA, 2011).

### **Food habits and food expenses**

The food habits in Haiti are affected by taboos, with some plant and animal species that are consumed by some cultures are shunned in Haiti. Examples include bamboo shoots, sweet potato leaves, and horse meat. Haitians are very religious and religion play an important role in the food habits. For instance, Adventists do not eat pork and Jehovah's Witnesses do not consume blood.

According to CNSA (2011), at national level households spend 65% of their incomes on food, 10% on education and 3% on healthcare. The total average expenses per person per month are 2,396 Haitian Gourde (HTG)<sup>2</sup>. The food expenses are divided between cereals (26%, of which 21% is for rice), legumes, roots and tubers (10%), meat and fish (13%), milk and dairy products (4%), oils and fats (8%), and fruits and vegetables (4%).

---

<sup>2</sup> US\$1 = HTG50–60

## **Institutions and governance structures in charge of policies**

### **Policy creation**

In Haiti, it is executive authorities, particularly government ministries, whose mission is to formulate and determine the direction of public policy. MARNDR, via CNSA, defines food security policies and programmes. CNSA works in close collaboration with the MSPP Directorate of Nutrition for the nutritional aspects. In creating the policies, CNSA also benefits from collaboration with:

- Ministries represented in the Inter-ministerial Council for Food Security (CISA), and the National Commission for the Fight Against Hunger and Malnutrition (COLFAM) which is an inter-ministerial platform. The following ministries are represented in COLFAM: MARNDR, MSPP, Ministry of Social Affairs and Work (MAST), Ministry of Women and Women's Rights (MCFDF), Ministry of Environment (MDE), Ministry of Trade and Industry (MCI), and the Ministry of Economics and Finance (MEF).
- International support institutions including Food and Agriculture Organization of the United Nations (FAO), World Food Programme (WFP), European Union (EU), Agence Française de Développement (AFD), La Iniciativa América Latina y Caribe sin Hambre (Latin America and Caribbean Without Hunger Initiative), Inter-American Institute of Cooperation for Agriculture (IICA), and the Inter-American Development Bank (IDB).
- Foreign government agencies: United States Agency for International Development (USAID) and AFD.
- NGOs: National Platform of Food Security (PFNSA), and the Initiative de la Société Civile.

Usually, international institutions and foreign government agencies act as donors or provide expertise.

### **Institutions and structures in charge of policy implementation**

Usually, efforts to address FNS in Haiti are not dealt with on their own. These issues are generally addressed together with extreme poverty, environment concerns, and low farming incomes. Therefore FNS is considered as part of a package in which different institutions are involved. For instance, the implementation of programmes related to the National Policy of Food Sovereignty and Food and Nutrition Security in Haiti (Politique Nationale de Souveraineté et de Sécurité Alimentaire et Nutritionnelle en Haïti, PNSSANH) involves 14 institutions, including nine ministries (Table 4). MARNDR, MCI, and MEF are the ministries most involved (Table 4). CNSA (which is under MARNDR) is also very involved in food security policy development and implementation. MSPP is in charge of national nutrition programmes, while MARNDR takes charge of the agricultural policies that aim to tackle FNS.

**Table 4:** Ministries and other institutions involved in the implementation of PNSSANH

No.	Institution	Strategic action/programme they implement
1	MARNDR	<p>Agricultural recovery plan.</p> <p>Reinforce border control to prevent cheaper agricultural products being smuggled.</p> <p>Create reserves of the five strategic food commodities.</p> <p>Implement agricultural insurance (against natural disasters, robbery).</p> <p>Establish local structures to purchase agricultural commodities.</p> <p>Programme of social security (EDE PEP, ti manman cheri, kore fanmi, kore etidyan, etc.)</p>
2	MCI	<p>Reinforce border control to prevent cheaper agricultural products being smuggled.</p> <p>Create reserves of the five strategic food commodities,</p> <p>Establish a cabotage system for the distribution of food and petroleum products.</p> <p>Define and distribute roles and responsibilities among market actors.</p> <p>Establish regulations along the value chain regarding the production and trade of food.</p>
3	MEF	<p>Creation of a national fund for food sovereignty and security.</p> <p>Boost the supply of five strategic food commodities.</p> <p>Reinforce border control to prevent cheaper agricultural products being smuggled.</p> <p>Rationalise the customs system.</p> <p>Implement agricultural insurance (against natural disasters, robbery).</p>
4	Office of the Delegate Minister for Peasant Promotion (Bureau de la Ministe Delege a la Promotion de la Paysannerie, BMDPP)	Agricultural recovery plan
	BMDPP	<p>Create reserves of the five strategic food commodities.</p> <p>Establish local structures to purchase agricultural commodities</p> <p>Programme of social security (EDE PEP, ti manman cheri, kore fanmi, kore etidyan, etc.).</p>
5	MDE	Agricultural recovery plan

No.	Institution	Strategic action/programme they implement
6	MPCE	Creation of a national fund for food sovereignty and security.
7	Ministry of Justice and Public Safety (MJSP)	Reinforce border control to prevent cheaper agricultural products being smuggled.
8	MAST	Programme of social security (EDE PEP, ti manman cheri, kore fanmi, kore etidyan, etc.).
9	MSPP	National Nutrition Program
10	Office of the Monetization of Development Aid Programs (Bureau de Monétisation des Programmes d'Aide au Développement, BMPAD)	Create reserves of the five strategic food commodities.
	BMPAD	<p>Establish a cabotage system for the distribution of food and petroleum products.</p> <p>Establish local structures to purchase agricultural commodities.</p> <p>Oblige public institutions (health institutions, National School Meals Program (Programme National de Cantine Scolaire, PNCS), ministries) to purchase at least 50% of their food from local producers.</p>
11	CNSA	<p>Create reserves of the five strategic food commodities.</p> <p>Establish national monitoring of food prices.</p> <p>Establish local structures to purchase agricultural commodities.</p>
12	Economic and Social Assistance Fund (Fonds d'Assistance Economique et Sociale, FAES)	Programme of social security (EDE PEP, ti manman cheri, kore fanmi, kore etidyan, etc.).
13	General Administration of Customs (Administration Générale des Douanes, AGD)	Reinforce border control to prevent cheaper agricultural products being smuggled.
14	Haitian National Police (Police Nationale d'Haïti, PNH)	Reinforce border control to prevent cheaper agricultural products being smuggled.

### **Institutions and structures involved in the implementation of FNS programmes in the field**

Projects related to FNS policies are implemented by ministry services and units, sometimes in collaboration with NGOs. Some international organisations and foreign government agencies (IDB, USAID, EU, World Bank, United Nations Development Programme (UNDP),



WFP, and the United Nations Children's Emergency Fund, UNICEF) also act as donors. MARNDR and MAST are the ministries most involved in FNS projects in the field. Some of the most active international NGOs working on FNS include (Comité de Coordination des ONG Internationales en Haiti, 2012):

- Agence d'Aide à la Coopération Technique et au Développement

Its areas of intervention include food security, nutrition security, health, activities aiming to increase income via diversification of activities, development of agriculture and agroforestry. Its zones of intervention are Low Artibonite, Plateau Central, Leogane, Port-au-Prince and Croix des Bouquets, and it has been working in Haiti since 2004.

- Action Against Hunger

Working in Haiti since 1985, Action Against Hunger's areas of intervention include: responding to the primary needs of people affected by crisis; reinforcement of resilience capacity of individuals, families, communities, and institutions; improvement of access to basic services; prevention and reduction of risks linked to natural catastrophes and disasters. It works in metropolitan areas of Port-au-Prince, Artibonite and Nord-Ouest.

- ATD Quart Monde – Terre et Homme de Demain

Its areas of intervention include health and nutrition education, monitoring development of children, and the fight against extreme poverty, targeting the most vulnerable. It focuses on Martissant, Port-au-Prince and has been working in Haiti since 1990.

- CARE

CARE works in different sectors, including food security, health, education, economic development, water and waste management, and (since the January 2010 earthquake) housing and urban development. Its zones of intervention include Grand'Anse, Artibonite, Nord-Ouest, and Ouest. It has been intervening in Haiti since 1954.

- Cooperazione e Sviluppo (CESVI)

CESVI focuses on emergencies, endemic diseases, food security, social protection, children's education, social affairs, and natural resources management in Nord, Nord-Est, and Sud. It has been working in Haiti since 2009.

- Concern Worldwide

Its areas of intervention include education, water and sanitation, economic development and food security, particularly in Port-au-Prince and La Gonave (Ouest), and Saut d'Eau (Centre). It has been working in Haiti since 1994.

- Church World Service (CWS)

For more than 20 years CWS has been working to strengthen food security, farmers association, microloans, education on children's rights, and reinforcement of capacities in Nord-Ouest.

- Catholic Relief Services (CRS)

CRS focuses on the areas of post-earthquake integrated community development, health, hygiene, nutrition, agriculture and the environment in all 10 departments. It has been working in Haiti since 1954.

- Wellthungerhilfe

Wellthungerhilfe works on food security, agriculture, water, renewable energy, health, and education in Jean Rabel (Nord-Ouest), Cap-Haitien (Nord), and Ouanaminthe (Nord-Est). It has been working in Haiti since 1974.

- Meds and Foods for Kids (MFK)

MFK focuses on local food production, distribution of nutritious foods, and malnutrition prevention and care in Nord, in particular in Cap Haitien. It has been working in Haiti since 2003.

National NGOs also participate in FNS activities. Some of these include:

- PRODEVA

It designs, develops and implements agricultural production programmes and projects in cooperation with Wellthungerhilfe. One of its project reports was titled "Improving food security and nutrition in small family farms in Belle-Anse and Grand Goave". Its areas of intervention include empowerment, socio-economic development, formal education, environment, professional training, teaching methods, early childhood education, health, and nutrition in Ennery (Artibonite), Belle-Anse (Sud-Est), and Grand-Goave (Ouest). It has been working in Haiti for 17 years.

- Concert-Action

Concert-Action works in partnership with Wellthungerhilfe, Caritas and ACDED and focuses on nutrition education and agriculture. Its policy is to promote a sustainable and profitable agriculture sector that will meet the basic needs of the population. The main objective of their projects is to improve the income of small farmers, improving access to water, and promote new techniques and seed management. Lactating women and malnourished children in their intervention zones are the target groups for nutrition education, which teaches the importance of nutritious food, hygiene and food preparation. Its zones of intervention are Petit-Goave (Ouest), and Marigot and Cayes Jacmel (Sud-Est) and has been working in Haiti since 1998.

- Haitian Association for Water and Soils Management (Association Haïtienne pour la Maitrise des Eaux et des Sols, ASSODLO)

Since 1989, ASSODLO has focussed on agriculture, the environment and food security in Vallée de Jacmel, Bainet, Forêt des Pins, Kenscoff, Grand-Bois et Seguin, Petit Gaove, Jean-Rabel, Baradères and Bombardopolis.

Universities implement research projects and provide expert services (laboratory analysis and studies). For instance, UEH's FAMV a banana culture improvement project (Projet

d'Amelioration de la Culture de la Banane, PACB) as part of the national Food Security Project (Sécurité Alimentaire, SECAL). CHIBAS and Université Quisqueya implement a project to increase food security through capacity building (Valorisation et renforcement des capacités pour un accroissement de la sécurité alimentaire en Haïti). A similar project is implemented by Université Laval (Valorisation et renforcement des capacités pour un accroissement de la sécurité alimentaire en Haïti : Une stratégie concertée en faveur de l'agriculture et de la sécurité alimentaire et nutritionnelle).

### **Role of women's organisations**

Women's organisations are not directly involved in the implementation of FNS policies, programmes or projects. However, they are active in advocating in all fields for the rights of women.

## **Major agricultural and FNS policies and programmes**

### **Policies**

The government has developed various policies and programmes to address agriculture and FNS. The most recent policies related to agriculture and FNS in Haiti include:

- 1996: the government, via CNSA, developed the National Plan for Food and Nutrition Security (Plan National de Sécurité Alimentaire et Nutritionnelle, PNSAN).
- November 2007: the National Strategy Document for Economic Growth and Poverty Reduction in Haiti (Document de Stratégie Nationale pour la Croissance et la Réduction de la Pauvreté, DSNCRP) was created by the government (MPCE, 2007). Its objectives were to boost economic growth and reduce poverty. Its biggest challenges included meeting the Millennium Development Goals (MDG), modernising the economy and strengthening state authority.
- 2010: with about 2 million people food insecure, CNSA and CISA updated the 1996 PNSAN (CNSA, 2011). This was aligned with the DSNCRP and MDG targets, in particular the goal to cut by half the number of people suffering food insecurity and malnourishment by 2015. PNSAN was also enabled the Haitian government to comply with its international commitments, particularly commitments made at the 1992 international conference on nutrition, the 2006 international conference on agrarian reform and rural development (Conferencia Internacional sobre Reforma Agraria y Desarrollo Rural, CIRADR), and those made as part of the Economic Partnership Agreement (Accord de Partenariat Économique, APE).
- May 2010: the government, via MARNDR, established the National Plan for Agricultural Investment (Plan National d'Investissement Agricole, PNIA) to develop rural infrastructure (watershed protection and irrigation), production capability, value chains, agricultural services and institutional support.
- January 2012: MSPP developed the National Nutrition Policy (PNN) to improve the nutrition and health status of the population, in particular pregnant and lactating women, and children under 5 years old.
- May 2012: the government created the Strategic Plan for the Development of Haiti (PSDH) to achieve economic growth, reduction of poverty, strengthening the middle class, social justice and security (MPCE, 2012).

- March 2013: MARNDR, on behalf of the government developed the 2013-2016 Programme Triennal de Relance Agricole (Triennial Agricultural Recovery Program) to contribute to the improvement of food security and economic growth in Haiti.
- February 2015: to guarantee food sovereignty and FNS, PNSSANH was created under the leadership of the Prime Minister to:
  - Stabilise the food supply through:
    - Research, education and input subsidies to increase production.
    - Regulate imports through taxation, subsidies and quotas.
    - Creation and management of stock piles of strategic crops
  - Reduce the vulnerability of the population through:
    - Minimising risks by developing harvest insurance, and long-term purchase and sale contracts to reduce the risk of price volatility.
  - Improve the food distribution system through:
    - Modernisation of commodity exchanges by constructing infrastructure (transport, storage and communications).
    - Development of quality standards.
    - Development of a credit system (storage credit, goods credit).
  - Transfer resources through:
    - Social assistance programmes.

Agricultural policies are designed to sustainably satisfy the food and nutritional needs (sustainably, quantitatively and qualitatively) of the Haitian people and lead to social and economic development (CNSA & CISA, 2010; MARNDR, 2011a). The objectives of the PNN are to: improve the nutrition and health of the Haitian population, particularly pregnant and lactating women and children under 5 years old; and strengthen strategies to fight the double burden of malnutrition and micronutrient deficiencies (MSPP, 2013).

The objectives of agricultural policies are to:

- Foster the development of initiatives and private investment in agriculture, particularly for farmers, but also producer organisations and firms supplying goods and services to farmers.
- Practice good governance of public resources (through dialogue between different categories of actors), search for consensus among various stakeholders, and manage budgetary resources transparently.
- Ensure active participation of key stakeholders, including farmers and their organisations, in the creation and implementation of agricultural programmes, plans and projects.
- Promote the advancement of women and rural youth who derive income from agricultural production, notably by improving access to inputs, appropriate technologies, training and employment. In particular, youth inclusion will be built through entrepreneurship strategies to ensure dynamic succession.
- Ensure the continued participation (through institutional mechanisms) of civil society representatives (NGOs, private sector, producer organisations and other value chain

actors) in developing operational strategies, implementing programmes, and monitoring and evaluating these initiatives.

- Increase the proportion (5%) of national budgetary resources dedicated to investment in the agricultural sector between 2010 and 2025.

### **PNSSANH programmes and projects**

For the implementation of the four axes of the PNSSANH, 15 strategic actions have been foreseen. Those are:

PNSSANH has 15 strategic actions: an agricultural recovery plan; creation of a national fund for food sovereignty and security; boost the supply of five strategic food commodities; reinforce border controls to prevent cheaper agricultural products being smuggled; rationalise the customs system; create reserves of the five strategic food commodities; implement agricultural insurance (against natural disasters, robbery); establish national monitoring of food prices; establish a cabotage system for the distribution of food and petroleum products; establish local structures to purchase agricultural commodities; define and distribute roles and responsibilities among market actors; establish regulations along the value chain regarding the production and trade of food; programme of social security (EDE PEP, ti manman cheri, kore fanmi, kore etidyan, etc.); develop the National Nutrition Program; and oblige public institutions (health institutions, National School Meals Program (Programme National de Cantine Scolaire, PNCS), ministries) to purchase at least 50% of their food from local producers.

Each strategic action consists of one or more components (programmes, projects or interventions). Table 5 presents the institutions in charge of implementing each of the 15 actions, and its components.

**Table 5:** Components of the strategic actions and ministries and/or institutions in charge

<b>Strategic action</b>	<b>Ministries and/or institutions in charge</b>	<b>Components</b>
1. Agricultural recovery plan	MARNDR, MDE and BMDPP	<ul style="list-style-type: none"> <li>• Develop hydro-agricultural infrastructure, and promote strategic crops (rice, maize, sorghum, bean, plantain and roots and tubers) and animal production (eggs, chicken, and milk).</li> <li>• Watershed protection, coupled with development of fruit crops (mango, avocado, citrus, etc).</li> <li>• Develop fisheries and aquaculture.</li> <li>• Improve basic agricultural service supply (research, education, extension, plant and animal pathology</li> </ul>

Strategic action	Ministries and/or institutions in charge	Components
		control).
2. Creation of a national fund for food sovereignty and security	MEF and MPCE	<ul style="list-style-type: none"> <li>Develop necessary structures for identifying funding sources for the implementation of the 15 strategic actions.</li> </ul>
3. Boost the supply of five strategic food commodities	MEF and BMPAD	<ul style="list-style-type: none"> <li>Develop the necessary financial mechanisms for to import the five strategic food commodities, and establish a structure to manage pricing, ordering, and monitoring of distribution.</li> </ul>
4. Reinforce border control to prevent cheaper agricultural products being smuggled	MCI, MEF, MARNDR, Ministry of Justice and Public Safety (MJSP), AGD, and the Haitian National Police (Police Nationale d'Haïti, PNH).	<ul style="list-style-type: none"> <li>Develop and apply decisions to reinforce border controls for subsidised products.</li> </ul>
5. Rationalise the customs system	MEF	<ul style="list-style-type: none"> <li>Create a commission to reform the customs system.</li> </ul>
6. Create reserves of the five strategic food commodities	MCI, BMPAD, MARNDR, BMDPP, and CNSA	<ul style="list-style-type: none"> <li>Develop mechanisms for creating and managing (purchase, sale, storage, supply) food reserves, and assessing the food aid system.</li> </ul>
7. Implement agricultural insurance (against natural disasters, robbery)	MARNDR and MEF	<ul style="list-style-type: none"> <li>Create the judicial and institutional framework for agricultural insurance.</li> </ul>
8. Establish national monitoring of food prices	CNSA	<ul style="list-style-type: none"> <li>Fund the related draft law and establish necessary structures to monitor food prices.</li> </ul>
9. Establish a cabotage system for the distribution of food and petroleum products	MCI and BMPAD	<ul style="list-style-type: none"> <li>Purchase boats.</li> <li>Create management structures (purchase, sale, storage and supply).</li> </ul>
10. Establish local structures to purchase agricultural commodities	MARNDR, BMPAD, BMDPP, and CNSA	<ul style="list-style-type: none"> <li>Meet with rural community associations, and establish local structures for purchase of agricultural food commodities.</li> <li>Create management structures (purchase, sale,</li> </ul>

Strategic action	Ministries and/or institutions in charge	Components
		storage and supply).
11. Define and distribute roles and responsibilities among market actors	MCI	<ul style="list-style-type: none"> <li>Develop a law on food trade.</li> </ul>
12. Establish regulations along the value chain regarding the production and trade of food	MCI	<ul style="list-style-type: none"> <li>Develop a law on food trade.</li> </ul>
13. Programme of social security (EDE PEP, ti manman cheri, kore fanmi, kore etidyan, etc.)	MAST, Economic and Social Assistance Fund (Fonds d'Assistance Economique et Sociale, FAES), MARNDR and BMDPP	<ul style="list-style-type: none"> <li>Reinforce existing programmes and increase the works with intensity of labours.</li> </ul>
14. National Nutrition Program	MSPP	<ul style="list-style-type: none"> <li>Establish the programme.</li> </ul>
15. Oblige public institutions (health institutions, National School Meals Program (Programme National de Cantine Scolaire, PNCS), ministries) to purchase at least 50% of their food from local producers	BMPAD	<ul style="list-style-type: none"> <li>Create management structures (purchase, sale, storage, supply).</li> </ul>

In addition to PNSSANH's 15 strategic actions, the following programmes have also been created:

- Programme de Renforcement Institutionnel et de la Gouvernance du Secteur Agricole (Program for Institutional Strengthening and Governance of the Agricultural Sector)
- Programme d'Appui à l'Agriculture Familiale (Programme of Support for Family Agriculture)
- Programme de Renforcement de l'Agriculture à Finalité Commerciale (Program of Strengthening of Commercial Agriculture)
- Programme of Development of Rural Infrastructure and Protection of Watersheds (DIRAB)
- Food Safety Enhancement Program in Haiti (Programme d'Amélioration de la Sécurité Alimentaire en Haïti, PASAH)

Additional programmes provided by the government include:

- Social safety programmes to improve access to food for the most vulnerable: school meals for children; cash transfers and food targeted at vulnerable families; job creation in emergency management; and contingency food stocks in case of disaster.
- Agricultural investment programmes to increase domestic food production: improved access to basic agricultural inputs such as seeds, fertilisers, land and irrigation. In

addition, social safety programmes will use, as much as possible, local agricultural products to stimulate accelerated growth.

- Improvement of basic services: Polyvalent Development Agents (ADP) provide essential services, targeting the most vulnerable families; health and nutrition programmes; and improvement of water and sanitation infrastructure and crop storage facilities.

The main actions relate to the environment, agriculture and irrigation, roads, education, health, waste management and drinking water.

Besides the programmes, projects and intervention related to government policies, sometimes international organisations also create programmes to be implemented in Haiti. This is the case of the 2003 UN Integrated Emergency Response Programme Targeting Vulnerable Groups and Communities in Haiti.

The main projects implemented in the field as part of PNSSANH involve:

- Development of hydro-agricultural infrastructure.
- Development of value chains of strategic foods (rice, maize, sorghum, beans, plantains, roots and tubers, eggs, chicken, milk)
- Watershed protection with an emphasis on fruit crop production (mango, avocado, citrus).
- Development of fisheries and aquaculture.
- Supply of basic agricultural services (research, education, extension, pest control)

The main projects (completed or in progress) include:

- SECAL in Artibonite, Ouest and Sud;
- Subsidy Program for Fertilizers (Programme de Subvention des Fertilisants, PSF) in 10 geographical departments;
- PNCS;
- Subsidy Program for Seed in 10 geographical departments;
- PASAH; and
- National Program of Artificial Lakes (Programme Nationale des Lacs Collinaire), PNLC).

Some characteristics of the first four are provided in more detail:

- SECAL: is implemented in the departments of Ouest, Artibonite and Sud by MARNDR, via the Directorate of Agricultural Infrastructure (DIA) for Ouest and Artibonite and the Agricultural Departmental Directorate in Sud (DDAS) for Sud.

#### SECAL Ouest

- Departments: Ouest and Artibonite
- Communes: Cabaret, Arcahaie/Montrouis (Ouest), Saint-Marc (Artibonite)
- Project leader: MARNDR/DIA
- Objective: increase agricultural production, food availability and farmers' income in the departments of Ouest and Artibonite.
- Funding: EU and AFD
- Budget: €3,000,050
- Partners: DIA works with partners who manage the project:



- Association of Irrigators of Plains of Arcahaie (AIPA)
- Association des Irrigators of Coast of Arcadins (AICA)
- FAMV is in charge of PACB. In PACB intervention areas, banana yield has increased from 15-35 t/ha.
- Components:
  - Technical support to and reinforcement of the capacity of plantain value chain actors in Ouest and Artibonite.
  - Provide support for the development of rural credit.
- Interventions:
  - Support the Association of Irrigators of Plains of Arcahaie (AIPA)
  - Support the Association des Irrigators of Coast of Arcadins (AICA)
  - Improve plantain cultivation in the Plains of Arcahaie and Montrouis-Saint-Marc.
  - Protect the basic hydraulic infrastructures of irrigated areas in Arcahaie and Saint Marc.
  - Modernise irrigation infrastructure to increase the efficiency of water use in the Plains of Arcahaie.
  - Introduce rural credit in Arcahaie and the Coast of Arcadins, Montrouis-Saint-Marc. The growers should benefit from agricultural loans from microfinance institutions established in the area, and support from the Financing and Agricultural Insurance System in Haiti (Système de Financement et d'Assurances Agricoles en Haïti, SYFAAH) programme, and agricultural insurance from Insurance Funds of Agricultural Loans in Haiti (Fonds d'Assurance Prêt Agricole en Haïti, FAPAH). SYFAAH is implemented by Développement International Desjardins (DID).
- Expected results:
  - Equip 1,000 ha with modern irrigation structures in Montrouis-Saint-Marc, and reinforce and consolidate 6,500 ha in Arcahaie.
  - Protect three dams in Arcahaie
  - Rehabilitate one aqueduct Saint-Marc.
  - Consolidate and reinforce two irrigator's associations in Saint-Marc.
  - Reinforce the productive capacities of farmers.
  - Increase plantain crop yields in Saint-Marc, Montrouis and Arcahaie.
  - Improve irrigation water management in Arcahaie and Saint-Marc.
- Project duration: 2015-2017.

#### SECAL Sud

- Department: Sud
- Commune: Camp Perrin
- Project leader: MARNDR/DDAS
- Objective: increase and improve the production, preservation, processing and marketing of agricultural products; supply food to PNCS via WFP; and provide technical support and capacity building to maize and bean value chain stakeholders.
- Funding: UE and AFD.

- Budget: €16,200,000.
  - Partners: DDAS works in collaboration with partners who act as project managers:
    - Organization for the Rehabilitation of the Environment, a national NGO.
    - French National Institute for Agricultural Research.
    - Local private organisations including: ITECA, SOCAP SA, Consultation Plus, TECINA SA, and HYDROTECH.
  - Components and interventions:
    - Provide technical support to maize and bean value chains in irrigated areas, and eggs and poultry.
    - Support the development of policies to encourage the purchase of local food products.
    - Support the development of rural credit.
    - Reinforce the capacity of project management.
  - Project duration: 2013-2017.
- PSF: MARNDR works in collaboration with private organisations, including COMAG S.A., Agro Service S.A., Darbouco S. A., and Rimbold Import Export. The government gives these companies a subsidy of 40-60% and determines the price farmers receive.
  - PNCS: activities are implemented by WFP in collaboration with different ministries, including MARNDR (who coordinate the programme) and the Ministry of National Education and Professional Training (MENFP). So far, 1.5 million children are being fed at school, with 3 million the target.
  - The National Seed Service (Service National Semencier, SNS) preserves, produces, and evaluates seed (mainly maize and beans) for MARNDR. SNS provides good quality seed but does not produce enough for the entire country. To fulfil the requirement for seed for this subsidy programme, MARNDR also buys seed from private suppliers.
  - PNLC: beginning in 2008, the aim was to create 150 lakes with US\$25 million over 3 years. To date, 115 lakes have been created in the communes of Hinche, Mirebalais, Lascaobas, Belladère, Thomassique, Cerca-Cavajal (Plateau Central), Jean-Rabel, Port-de-Paix, Bonbardopolis, Baie-de-Henne (Nord-Ouest), Jacmel, La Vallée de Jacmel, Cayes-Jacmel (Sud-Est), Désarmes (Artibonite), Pignon (Nord), Aquin (Sud), Côtes-de-Fer (Sud-Est), Fond-des-Nègres (Nippes), and Cabaret (Ouest). They cover a surface area of 152 ha and store 5,770,684 m<sup>3</sup> for irrigation, watering of animals, fisheries, and domestic use.

Overall, agricultural programmes focus on food production increase and nutritional needs are not given much attention. However nutrition has been taken into consideration by MSPP in its programmes that support vulnerable women and children, some NGOs and international institutions. Amelyorasyon Kapasite pou Ogmante Sekirite Alimantè an Ayiti (AKOSAA), a project from Université Laval (Canada), is being implemented in Saint-Marc (Artibonite) to introduce cereals and legumes enriched with amino acids and micronutrients to reduce deficiencies. These projects are in line with national policies but they are too limited to have an impact at a national level.

## Working together

Some platforms exist to ensure that different actors involved across various FNS interventions work together. At government level, different actors (ministries) meet together through a platform called the Table of Concertation. Inside MARNDR, different structures meet together through a platform called the Sectorial Table to distribute roles to different structures to avoid duplication and conflict. Many NGOs, however, operate in Haiti in the sectors of agriculture and FNS, sometimes with no agreement from the authorities. Although there are currently 164 NGOs with government agreement, their activities do not necessarily match national food security plans.

## Status of FNS

### Food security situation

#### *Food supply*

The country's food comes from three sources: local production, private imports and food aid. In 1981, the share of food imports was about 19% and local food production represented 81%. Between 2003 and 2005, local food production accounted for 43%, while food imports amounted to 51% and food aid was around 6%. In 2010, net national production provided 48% of food, while food imports and aid accounted for 44% and 8% respectively (CNSA, 2011). The decrease in food imports between 2005 and 2010 was partly the result of an increase in local production and food aid. In 2014, Famine Early Warning Systems Network (FEWS NET, 2014) reported that local food production provided approximately 50% of total food supply, while food aid represented about 3% (8% in 2010, the year of the earthquake).

Imported food stuffs such as rice, eggs, and poultry meat represent about 80% of products consumed in the urban areas of Port-au-Prince. Milk and dairy products make up about 65% of the imports. This increases Haiti's vulnerability to food price increases on the international market. Similarly, it makes households vulnerable to food price increase in national markets.

CNSA (2011) reported that the food balance for the period 2005-2010 was positive (Table 6) but it is fragile because of a large share (44%) comes from imports. From 5.6% in 2005, it reached 15% in 2007 and 13.72% in 2010. In 2005, total food availability was estimated at 1.97 million t of cereals equivalent (TEC), rising to 2.6 million TEC in 2010.

**Table 6:** Food balance in 2010

Item	Estimate in t of cereals	% of total food available	% of needs
Food needs	2,269,173		
Local food production	1,266,119		
Food exports	30,000		
Net local food offer	1,236,119	48%	54.47%
Food imports	1,175,381		
Re-exportation	30,000		
Net food imports	1,145,381	44%	50.5%

Food aid	198,437	8%	8.75%
Total food availability	2,579,937	100%	113.72%
Food balance			13%

Source: CNSA, 2011

The low share of local food production (48%) may be explained by the weakness of the agricultural sector, characterised by:

- market liberalisation, prejudicial to local production;
- decrease of farm sizes;
- soil erosion;
- low availability of agricultural workers due to migration of young people to urban areas and the Dominican Republic;
- lack of production infrastructure; and
- lack of support services (agriculture credit, extension services, information on market prices, and access to agricultural inputs such as fertilisers and pesticides, etc.).

#### *Food consumption*

According to CNSA (2011), 17% of Haitian households had low levels of food consumption. In rural areas, the proportion dropped from 25% in 2007 to 20% in 2011. In areas affected by the earthquake, it fell from 30% in February 2010 to 27% in June 2010, and 13% in May 2011. This proportion also decreased in displaced people camps from 42% in February 2010 to 27% in June 2010, and 19% in May 2011. The prevalence of people having low levels of food consumption also decreased between 2007 to 2011 from 42-36% in Nord-Ouest, 38-18% in Nord and 35-17% in Nord-Est. In contrast, it increased in the same period from 18-22% in Centre, 11-18% in Nippes, and 16-20% in Sud.

#### *Food diversity*

Only 22.91% of households have a diverse diet (CNSA, 2011). Of those with an unsatisfactory diet, diversity is very low for 22.38% and unsatisfactory for 54.71%. In some departments, the proportion of households with an unsatisfactory diet are higher than the national average. This is case in Nord-Ouest (89.01%), Sud-Est (86.46%), Nippes (79.85%) and Sud (79.49%). Similarly, the situation is worse in rural areas (80.38% of households). When divided into agro-ecological zones, the percentage of households with an unsatisfactory diet was 97% in dry agro-pastoral zones, 83.8% in agro-pastoral zones in the plateau and (80.3%) in humid mountainous zones.

#### *Hunger*

Reports (CNSA, 2011) reveal that 21.7% of households experience severe hunger and 49.8% suffer from moderate hunger (totalling 71.5% of households). Three departments are particularly affected by hunger, with proportions higher than the national average. These departments are Artibonite (96%, of which 43% are affected by moderate hunger), Sud (81%), and Nord-Ouest (75%). Excluding Nord-Ouest where the percentages of food diversity and consumption are both low, these figures show no correlation between the diversity of food and food consumption. The prevalence of hunger in agro-ecological zones

varied largely from the national average, with 81.74% in dry agro-pastoral zones, 74.66% in humid mountainous zones, and 73.19% in the dry agricultural and fishery zones.

#### *Number of meals and types of food consumed*

CNSA (2011) reported that only 30% of people eat at least three times a day, 59% of households have access to two meals a day, and 11% eat less than two times a day. These are considered to be suffering from hunger and are very vulnerable, needing immediate aid.

#### *Food security*

Combining the scores of food consumption, food diversity and hunger, CNSA (2011) defined four levels of food security: high food security, moderate food security, moderate food insecurity, and severe food insecurity. It reported that:

- 38% of households have moderate food security and 24% have high food security, totalling 62%.
- Food insecurity affects 38%, with 29.9% facing moderate food insecurity and 8.1% suffering from severe food insecurity (Table 7).

Of the 8.1% households suffering from severe food insecurity, 1.5% are also facing at least one of the following additional challenges:

- The adult members (18-65 years old) cannot work because of a handicap, trauma, shock, or chronic disease.
- The household has more than 7 members, but only one is able to work.
- There is no adult in the household, so nobody is able to work.
- The head of the household is a widow.

On average, food insecurity affected 25% of households in Haiti in 2007. After the 2010 earthquake about 1.5 million became homeless and were forced to live in camps. As a result, food insecurity rose to 52% in February 2010, before dropping to 38% in June 2010.

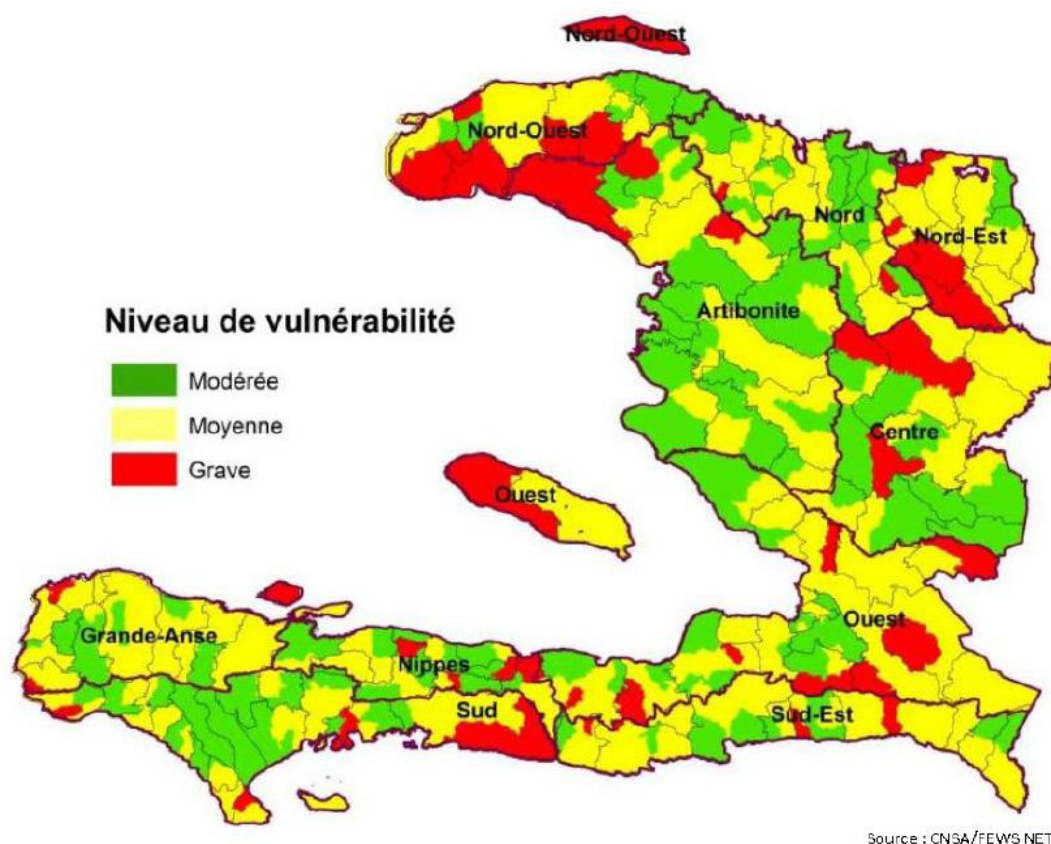
**Table 7:** Characteristics of food insecurity and malnourishment in Haiti

<b>Food insecurity indicator</b>	<b>% of people or households</b>
Food insecurity (overall score)	38% of people
Moderate food insecurity	29.9% of people
Severe food insecurity	8.1% of people
Food insecurity based on food consumption	17% of households
Food insecurity based on food diversity	77.09% of households
Food insecurity based on hunger	71.5% of households
Food insecurity based on number of meals per day	68% of households
Chronic malnourishment in children under 5 years old	23.44%
Severe chronic malnourishment in children under 5 years old	7.1%

Global acute malnourishment (GAM) in children under 5 years old	4.1%
Severe acute malnourishment (SAM) in children under 5 years old	1%
Anaemia in pregnant women	50%
Anaemia in children under 5 years old	70%
Iodine deficiency in 6-12 month olds	70%

Figure 2 reveals the areas most at risk of food insecurity. Haitian people live in an unstable environment, making them vulnerable to food insecurity. Risks include household shocks (death of a household member, disease, unemployment), population increases, low incomes, price volatility, epidemics, uncertainty of agricultural production, plant diseases, animal diseases, natural disasters (cyclones, flooding, and drought), and political instability.

In 2001, FAO reported that half of the population lived in extreme poverty on less than US\$1 a day, and did not have access to the minimal ration of 225 kg of cereal per year. The situation has not improved because CNSA (2012) and MARNDR (2013) reported that among a population of 10.1 million people, 1.5 million were severely food insecure, and 5 million were moderately food insecure. However, in 2015, CNSA estimated the number of food insecure people at 3 million.



**Figure 2:** Areas most at risk of food insecurity

Source: CNSA, 2011

## *Nutrition*

According to MSPP (2012), 23.44% of 6-59 month old children suffer from chronic malnourishment, and 7.1% face severe chronic malnourishment. The most affected departments are Nord-Est (32.9%), Grande-Anse (27.6%) and Nord (27%), while the less affected are the metropolitan area of Port-au-Prince in Ouest (16.4%), Centre (21.3%) and Sud (22.9%). On average 4.1% of children suffer from global acute malnourishment (GAM) and 1% suffer with severe acute malnourishment (SAM). The departments most affected by GAM are Nord-Est (6.7%), Sud-Est (5.8%) and Nord (5.5%), while the less affected are Sud (1.9%), Centre (2.4%) and Nord-Ouest (2.8%). Haiti is classified by OMS as a country with one of the highest rates of child malnourishment in the world (CNSA, 2011). Among the 15-49-year-old women, 11.3% suffer from chronic energy deficiency, 40% suffer with anaemia and 30% are overweight, of which 9% are obese. The highest prevalence rates of obesity are found in the metropolitan areas of Port-au-Prince in Ouest and the department of Sud, while the lowest are found in Nord-Ouest and Grande Anse.

The prevalence of chronic malnutrition nationally is 23.4%, and 37% of 18-23 month olds are stunted (MSPP, 2013). Hungry and/or malnourished people are mainly located in vulnerable communes of the departments of Nord-Est, Sud-Est (Belle Anse district), Ouest (La Gonave island), Artibonite and Centre (CNSA, 2015). In 2013, the department of Nord-Est was reported to have the highest prevalence of acute malnutrition, followed by the departments of Nord, Nippes, and Sud-Est (CNSA et al., 2013). Malnutrition takes many forms in Haiti including stunting (low height for age), wasting (too thin or low weight for height), low birth weight (less than 2.5 kg), and micronutrient deficiency (including anaemia caused by deficiencies in iron, vitamin A and deficiency) (Pierre, 2014). Anaemia affects 50% of pregnant women and 70% of children under 5 years, while over 70% of children aged 6-12 months suffer from iodine deficiency. Figures 3 and 4 show the distribution of chronic malnourishment and acute malnourishment, respectively.

## **Communities most at risk**

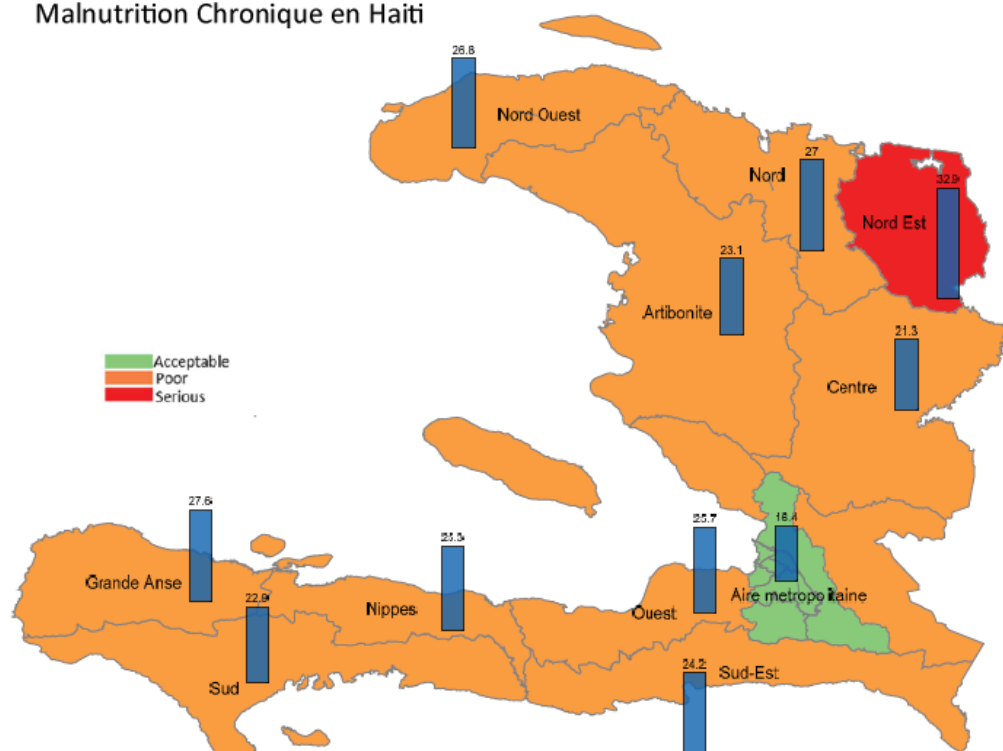
### *Variation of food insecurity*

The level of food insecurity varies largely from one geographic department to another (Table 8). In three departments, the percentage of food insecure households exceeds the national average of 38%: Artibonite (54.9%), Nord-Ouest (46.1%), and Sud (41.1%). In six others, the percentage is lower than the national level: Nord (28.9%), Nord-Est (30.5%), Nippes (30.7%), Grande-Anse (32.7%), Ouest (34%), and Centre (34%).

Nutrition data from the 2012 SMART inquiry (MSPP, 2012) revealed a chronic malnourishment prevalence of 23.4% (32.9% in Nord-Ouest having, 27.6% in Grande-Anse, and 27% in Nord-Est), and a severe malnutrition prevalence of 7.1%.

According to FEWS NET (2013), the cities considered most at risk of food insecurity in 2013-2014 were Bombardopolis and Baie de Henne in the department of Nord-Ouest, Anse-Rouge in Artibonite, and Jacmel and Bainet in Sud-Est.

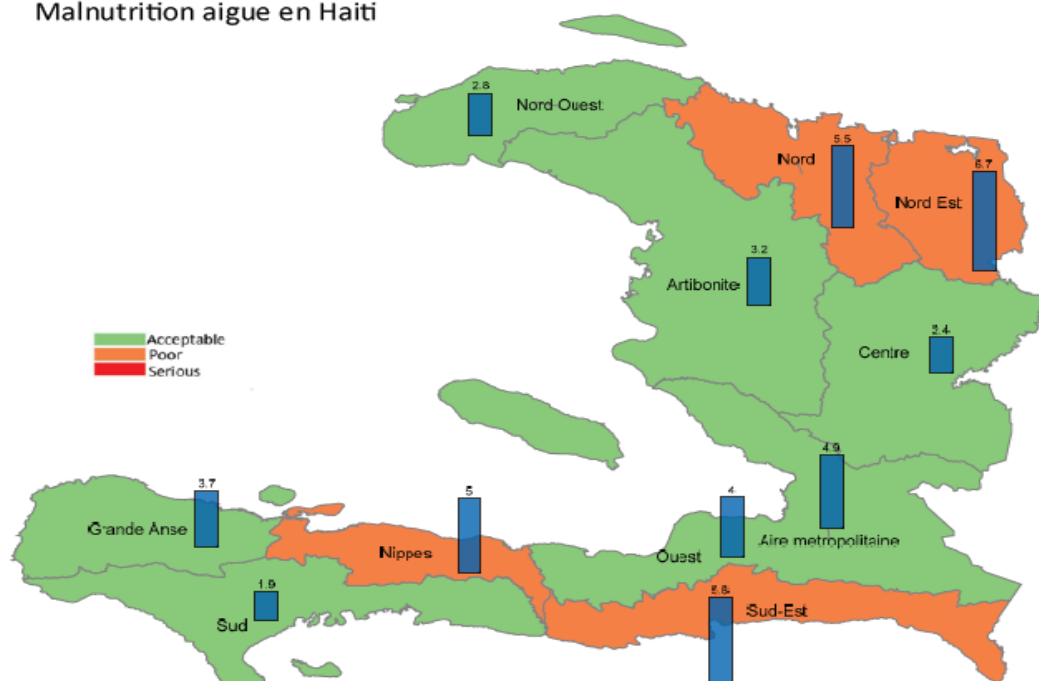
### Malnutrition Chronique en Haiti



**Figure 3:** Distribution of chronic malnourishment in Haiti

Source: MSPP, 2012

### Malnutrition aigue en Haiti



**Figure 4:** Distribution of acute malnourishment in Haiti

Source: MSPP, 2012



**Table 8:** Percentage of food insecure households in the 10 geographic departments

Department	Percentage of food insecure households
Artibonite	54.9
Nord-Ouest	46.1
Sud	41.1
Sud-Est	38.0
Ouest	34.0
Centre	34.0
Grande-Anse	32.7
Nippes	30.7
Nord-Est	30.5
Nord	28.9

*Food insecurity in rural and urban areas*

CNSA (2011) reported that the level of food insecurity is higher in rural areas (49.6%) than in the urban metropolitan areas of Port-au-Prince (39.9%) and other cities (34.6%). In some rural areas, 67% of households displaced by the earthquake were in food insecure in February 2010 but this had improved to 49.6% by June 2010. Similarly, in some urban areas, 70% of households displaced by the earthquake were in food insecure in February 2010 compared to 39.9% by June 2010. Rural areas are particularly at risks because of the impact of plant and animal diseases and natural disasters (cyclones, flooding, and drought).

*Food insecurity in agro-ecological zones*

Out of the six agro-ecological zones defined by CNSA, five have food insecurity levels that are higher than the national average of 38% (Table 9). They are: dry agro-pastoral zone (52.17%), agro-pastoral plateau (43%), humid mountainous zone (42.59%), semi-humid agro-pastoral zone (41.6%), and dry agricultural and fishery zone (40.9%). The prevalence of food insecurity is lower in plains where mono-cropping is practiced (34.4%).

**Table 9:** Percentage of food insecure households in the six agro-ecological zones

Agro-ecologic zones	% of food insecure households
Dry agro-pastoral zone	52.17
Agro-pastoral plateau	43
Humid mountainous agriculture zone	42.59
Semi-humid agro-pastoral zone	41.6
Dry agricultural and fishery zone	40.9
Plains where mono-cropping is practiced	34.4

### *Most at risk groups*

CNSA (2011) observed that groups most at risk of food insecurity include widows, young children, people displaced by the 2010 earthquake, households with adults unable to work (due to disability, disease or trauma) or households with more than seven members and only one adult able to work, and households headed by widows or children.

Agricultural workers are also more vulnerable than artisans, professionals and farmers. CNSA (2011) has observed a negative correlation between education level and the level of food insecurity.

## **Nutrition education programmes**

### **Structures in charge of nutrition education**

The MSPP Directorate of Nutrition is in charge of nutrition education, which is included in Haiti's primary school curriculum. This implies that MENFP is partially in charge of nutrition education. Concerning pregnant women and breastfeeding women, MSPP provides advice about appropriate diets in public health facilities. Many NGOs who provide health care, also teach patients what the best diets are to help deal with their health issues. Some radio programmes also air health and nutrition messages, although most are not at the request of the government so do not get state support.

### **Content of nutrition education programmes**

In schools, the nutrition education focuses on different food groups, the nutrients they contain and the impact they have on the body, and the importance of having a balanced diet. Radio messages tend to focus on the use, or non-use, of some foods for health reasons. People are encouraged to have a balanced diet including cereals and legumes, roots and tubers, animal source foods (meat, fish, eggs, milk), and fruits and vegetables. In health facilities, patients are informed about the diets best suited for their medical conditions.

### **Cultural aspects of food/dietary intake in nutrition education programmes**

Cultural aspects are normally not dealt with in radio transmissions, but this aspect is important. Some commodities used as food in other cultures are discarded in Haiti for religious reasons, tradition, or a lack of information about their benefits.

### **Women in nutrition education**

In Haitian culture, women are the main decision-makers when it comes to purchasing and preparing food, so benefit from nutrition education from schools, health facilities and radio programmes. Radio programmes that contain nutrition education are open to all, but men do not really pay attention.

## **Information and knowledge management**

Information and knowledge management in the agriculture and nutrition sectors is collected and organised by different institutions.

## **Structures in charge of information and knowledge management**

- **MARNDR**

CNSA, a structure of MARNDR, operates the National Observatory of Food Security (Observatoire National de la Sécurité Alimentaire, ONSA). ONSA generates and provides information related to food security in the country. MARNDR has antennas in almost all municipalities. Agricultural Departmental Directorates (DDA) and Communal Bureaus of Agriculture (BAC) are involved in the monitoring of agricultural activities and are able to participate in the collection and dissemination of information needed to monitor food security. Some DDAs have a relatively large and diverse staff, particularly in Nord, Nord-Est and Sud. The Development Agency of the Artibonite Valley (ODVA) is an autonomous entity of great importance to the CNSA.

- **Ministry of Planning and External Cooperation (MPCE)**

MPCE is essential because of its transversal nature and its mandate to encourage cooperation between various actors. It monitors the activities of accredited NGOs in Haiti, so it is aware of their sectors of intervention. At a macro level, it monitors important information.

- **MSP**

MSP, through its Departmental Directorates, collects information about the use of organic foods and other nutritional indicators which highlight the existence of problems related to food security.

- **MDE**

MDE monitors information related to soil degradation and other natural risks which affect the vulnerability of households and directly impact their sources of food and income.

- **MCI**

MCI manages a database on the prices of foods included in the 'consumer basket'. These data enable the evolution of food prices in the metropolitan area to be monitored.

- **General Administration of Customs (Administration Générale des Douanes, AGD)**

AGD, a structure of MEF, provides data on imports and exports of food products to calculate the annual national food balance.

- **IHSI**

IHSI is a structure of MEF which generates and provides economic information on inflation, exchange rates, and price developments.

## **Methods of communication**

Meetings between MARNDR technicians and farmers are a key communication method in the agriculture sector. Important nutrition messages are targeted at pregnant and lactating women in public health facilities by health professionals. Other communication channels for agriculture and nutrition include radio and TV, newspapers, press releases, technical reports

and publications, alerts, websites, emails, individual meetings with authorities or donors, and *ad hoc* presentations or interventions during meetings. Websites which explain the food security situation at a national level include those belonging to CNSA and Famine Early Warning Systems Network (FEWS NET).

## **Involvement of women's organisations in agriculture and FNS**

Women are present in agricultural production, food processing and commercialisation processes. Their role in agriculture and food trade is important, and despite some de-feminisation of certain tasks in agriculture, their presence is noticeable. Their activities play a direct and important role in the food security of their families, but most of their agriculture and nutrition-related activities occur on an individual basis, rather than through organisations. Just like men, they often earn a wage that they can invest in family nutrition and well-being (Jean-Baptiste & Jean-Baptiste, 2005). However, there is little consideration of gender in the development or implementation of agriculture or nutrition programmes.

## **Discussion**

There are policies addressing agriculture and FNS in Haiti with a primary goal to guarantee food sovereignty and FNS. Some projects provide incentives to facilitate their implementation. Policies try not to exclude any group however some programmes target vulnerable groups, such as children under 5 years old and pregnant women, separately or together. The main institutions working on food security in Haiti are MARNDR and its structures, in particular CNSA, while MSPP is involved in nutrition activities. MSPP work in collaboration with MARNDR, but other ministries such as MPCE, MCI and MEF are also involved, although at a lesser level. International organisations act as donors and provide expertise. NGOs and local organisations also implement programmes and projects. While universities implement related research projects and provide services.

Agricultural education is managed by MARNDR via its agricultural education and extension (which is weak) services, while nutrition education is managed by MSPP's Directorate of Nutrition. In practice, messages are communicated face-to-face in agriculture meetings and public health facilities. When there is an important issue to raise awareness about (such as epidemics, new plant or animal pests, or zoonosis), posters are displayed in public spaces and printed in newspapers, and messages are broadcast on the radio. No special attention is given to the cultural aspects of nutrition education programmes. Changes in dietary patterns have occurred over the years, but they are not well documented and monitored.

Priority interventions for improving FNS outcomes focus on increasing national agricultural production and farmer's incomes. The sector, including animal husbandry, fisheries, and forestry exploitation, contributes about a quarter of Haiti's annual GDP and involves about 60% of the population. However, the agriculture sector faces many problems:

- Average farm sizes are small (about 0.62 ha) so pressure on agricultural land is high. This also means that land is often overexploited and suffers from soil, water and forest degradation.
- Less than 30% of farmers use fertilisers, although the government has provided subsidies of up to 80% since 2008.

- About 10% of farmers have access to irrigation water, resulting in low crop yields nationally.
- Natural disasters (in particular hurricanes, floods, droughts) occur frequently, particularly in some areas of the country.
- Other characteristics of the agri-food system includes: land conflicts that discourage potential private investors; weak financial system; deficiencies in research and technical support, agricultural extension and education services, and agricultural and rural infrastructure; small proportion of the state's budget spent on agriculture; poor availability of animal feed, resulting in low productivity; lack of pest control; high level of postharvest losses (about 35%); lack of standards and quality control systems; and excessive market liberalisation in agricultural products (low tariffs, elimination of quantitative restrictions).

The main crops are rice (*Oryza sativa*), maize (*Zea mays*), sorghum (*Sorghum vulgare*), yam (*Dioscorea sp.*), yucca (*Manihot esculenta*), sweet potato (*Ipomea batatas*), potato (*Solanus tuberosum L.*), banana (*Musa sapientum*), plantain (*Musa paradisiaca*), common bean, pigeon pea, other beans, and a variety of vegetables including cabbage, pepper, onion, carrot, and leek. The main animal species are horses, donkeys, mules, chickens, ducks, turkeys, pigeons, pigs, sheep, goats, and cattle. Most households only keep a few livestock (about five birds, two goats, one pig, one sheep, one cow and one horse, ass or mule).

Women are very involved in food production, food distribution, and food preparation. However, there aren't many women's organisations involved in this sector. The two major women's organisations that exist in Haiti are Solidarité Fanm Ayisyèn (SOFA) and Fanm yo la. They are very active in social and political matters, but not in policies, programmes and projects addressing agriculture and FNS issues. Encouraging women's organisations to become more involved in agriculture and nutrition could help to empower women and increase their impact at a household level.

Although 60% of the population practice agriculture, national food production only meets about 50% of Haiti's food needs, and the level of food insecurity is higher in rural areas (49.6% of households) than in urban metropolitan areas of Port-au-Prince (39.9% of households) and in other cities (34.6% of households). Over a third of the population (38%) is food insecure, of which 29.9% face moderate food insecurity and 8.1% suffer from severe food insecurity.

The agricultural sector needs more support to help farmers produce more and make more money from their agricultural activities, to enable them to produce enough to nourish themselves and their family and reduce the country's dependence on food imports. Some of the stakeholders that were surveyed felt that small farm sizes weaken the impact investment and capacity building has. Stakeholders suggested a land reform programme where farmers would be grouped in well-organised and well-trained associations and operate on larger farms.

The interviewed stakeholders acknowledged that food insecurity is a transversal issue and not only an agricultural problem. All sectors and government ministries therefore need to cooperate to address FNS. There was consensus for building a multi-stakeholder, multi-disciplinary, inter-sectoral, and inter-ministerial platform to promote cooperation and partnerships to improve FNS outcomes at the national level. In Haiti, a platform involving different ministries exists, but this needs to be scaled up.

Government instability has also had a negative impact on the implementation of FNS policies and programmes. Absence of agricultural insurance and credit, land tenure insecurity, land conflicts, and civil insecurity have also negatively affected the levels of private investment the agricultural sector has received.

## Conclusion

Haitians live with chronic food insecurity. The government, with support from international organisations and national institutions, develop and implement policies, programmes and projects to address FNS, but 38% of the population is still food insecure, the level of malnutrition is high, and the population is vulnerable to shocks. Although 60% of the population are involved in agricultural production, Haiti only produces about 55% of the total food required. Farmers are also poorer than people living in cities. While the food balance is positive overall, economic access is limited therefore food insecurity is a problem of food access rather than a question of food availability. Utilisation is also limited by food habits, religious practices, culture and taboos. Farmers need more technical, financial, and institutional support. They need more access to credit, agricultural insurance, inputs (seeds, pesticides and fertilisers), and irrigation facilities. Any initiative aiming to increase local food production, increase household incomes, or improve nutrition education would be beneficial.

## Recommendations

To effectively address FNS, Haiti requires:

- 1) Consensus among actors and reinforcement of cooperation.
  - This consensus should lead to effective land use reform, and organisation of small farmers into associations to increase farm sizes.
  - It should also facilitate the development of secondary and tertiary economic sectors in parallel with the agriculture sector to decrease the pressure on agricultural resources and increase household incomes.
- 2) A judicial approach to address FNS in Haiti.
- 3) Greater involvement of women's organisations in FNS activities. They will need to be motivated and given training.

Potential entry points in the short-term could include:

- 1) Nutrition education (primary schools can be used to reach the parents of children).
- 2) Promotion of home food production (*jaden lakou*) and diversification of food production and consumption.
- 3) Extension of irrigated areas to increase farmers' access to irrigation water.
- 4) Increase of farmers' access to agricultural inputs (seeds, fertilisers, and pesticides).
- 5) Promotion of agricultural research, education and extension.

To address vitamin A deficiency and anaemia, potential actions could include:

- Food fortification at home (supplementation using sprinkles: 15 micronutrients) for infants and school age children.
- Food fortification by food processors (i.e. Moulin d'Haiti processes wheat into flour).

- Improving the nutrition status of people suffering from SAM and moderate acute malnutrition by using locally produced ready-to-use therapeutic food (RUTF).
- Bio fortification:
  - The International Center for Tropical Agriculture (CIAT) is conducting a project to promote the use of orange fleshed sweet potato in two departments that could be extended.
  - AKOSAA is conducting an iron-rich beans project in the commune of Saint-Marc, Artibonite, which could be extended to other areas.

Potential partners for projects to address vitamin A deficiency and anaemia could include: CTA, World Health Organization, Pan American Health Organization, CARPHA, UNICEF, WFP, EU, MARNDR, MENFP, MSPP, MAST, MWA, universities (in particular FAMV/UEH), civil society, and local communities.

For these initiatives, new crop varieties could be evaluated and introduced. Local varieties should also be evaluated. Nutritional data also needs to be collected and monitored. Indicators could include vitamin A deficiency, anaemia, anthropometric measures, 24-hour recall, food consumption frequency, etc. There is also a lack of data on the nutritional status of school aged children (5-12 years), and data on vitamin A deficiency and anaemia for children under 5 years old needs to be updated.

Agriculture experts (nutritionists, agribusiness specialists, etc.) and nutrition experts (agronomists, food scientist, university faculties, etc..) should work together to promote production and consumption of locally produced RUTF, (e.g. green leafy vegetables, orange flesh sweet potato), survey green leafy vegetables per department, describe and evaluate different ways of consumption, review the existing nutrition curriculum with MENFP, and identify gaps in nutrition and agriculture with UEH.

## References

- CNSA and CISA. 2010. Actualisation du plan national de sécurité alimentaire et nutritionnelle. MARNDR. Port-au-Prince, Haïti. 70 p.
- CNSA et ONSA. 2011. Directives pour le fonctionnement d'un système national de surveillance de la sécurité alimentaire et d'alerte précoce. Haïti. 97 p.
- CNSA, MARNDR, and MSPP. 2013. Information sur la situation nutritionnelle. Haïti, 5 p.
- CNSA. 2011. Enquête nationale de la sécurité alimentaire. MARNDR. Port-au-Prince, Haïti. 182 p.
- Comité de Coordination des ONG Internationales en Haïti. 2012. Aide Humanitaire et Développement Durable. 38 p.
- FEWS NET. 2013. Perspectives de la sécurité alimentaire 2013-2014. 7 p.
- FEWS NET. 2014. Haïti sécurité alimentaire en bref. 44 p.
- IHSI. 2010. Enquête sur l'Emplois et l'Economie Informelle (EEEI)
- Jean-Baptiste M. G. O and Jean-Baptiste B. 2005. Femmes et pouvoirs: enjeux pour un véritable développement en Haïti. Haïti, 20 p.
- MARNDR. 2010. Plan national d'investissement agricole. MARNDR. Port-au-Prince, Haïti. 94 p.
- MARNDR. 2011 a. Politique de développement agricole 2010-2025. Damien, Haïti, 28 p.

- MARNDR. 2011 b. Plan Directeur de Vulgarisation Agricole 2011-2016. MARNDR. Port-au-Prince, Haïti. 101p.
- MARNDR. 2013 a. Le Foncier : Contraintes liées au foncier. Damien, Haïti, 1p. ???
- MARNDR. 2013 b. Programme triennal de relance agricole 2013-2016. MARNDR. Port-au-Prince, Haïti. 75 p.
- Mathurin E. and Bayard B. 2008. Etat des lieux de la sécurité alimentaire en Haïti-Rapport final. 98 p.
- MPCE. 2007. Document de stratégie nationale pour la croissance et la réduction de la pauvreté (DSNCRP). Imprimerie Deschamps. Port-au-Prince, Haïti. 172 p.
- MPCE. 2012. Plan stratégique de développement d'Haïti. MPCE. Port-au-Prince, Haïti. 306 p.
- MSPP. 2012. Rapport de l'enquête nutritionnelle nationale avec la méthodologie SMART. MSPP. Port-au-Prince, Haïti. 82 p.
- MSPP. 2013. Plan stratégique de nutrition 2013 à 2018. Haïti, 18 p.
- PIERRE J. M. 2014. La malnutrition en Haïti, Nous avons déjà payé un prix trop élevé. Haïti, 2 p. ???
- United Nations System in Haïti. 2003. Programme intégré de réponse aux besoins de communautés et populations vulnérables. 72 p.



## Annex A. Survey questionnaire

TECHNICAL CENTRE FOR AGRICULTURAL AND RURAL COOPERATION (CTA)

Building the Evidence Base on the Agricultural-Nutrition Nexus: Rapid Country Scans for  
Informing Policy and Practice

Questionnaire d'enquête

### Institutions définissant les politiques et les programmes liés a FNS

Nom de l'enquêteur : ..... Date : .....

### Identification de l'institution

Nom de l'institution : .....

Type d'institution	<div>1. Etatique_____</div> <div>2. Privée_____</div> <div>3. ONG _____</div> <div>4. Org. Internationale_____</div> <div>5. Org. locale_____</div> <div>6. Association de femmes_____</div> <div>7. Autre (préciser)_____</div>
--------------------	--

Répondant : .....

Tél : .....

Adresse : .....

### Description de l'institution

Question	Enoncé	Réponse	Code
Q1	Quel est le rôle de votre institution dans l'amélioration de l'alimentation et la sécurité alimentaire et nutritionnelle ?		1. Gouvernance 2. Conception et élaboration de politiques 3. Suivi des politiques, programmes et / projets 4. Conception et élaboration de programmes et projets 5. Exécution de programmes et projets 6. Financement de programmes et projets 7. Education 8. Bénéficiaires 9. Autres (préciser)
Q2	Avez-vous des partenariats avec d'autre (s) institution (s)?		1=Oui, 2=Non Si oui, lesquelles: ..... .....

### Description des interventions

Q3	Dans quel (s) secteur (s) intervenez-vous ? 1= Oui, 2 =Non	1. Agriculture _____ 2. Alimentation/nutrition _____ 3. Education _____ 4. Création d'emploi _____ 5. Autres (Préciser) _____
Q4	Quelles sont les politiques de votre institution en matière d'agriculture, de sécurité alimentaire et sécurité nutritionnelle ?	Réponse :
Q5	Votre institution reçoit-elle ou accorde-t-elle des stimulants pour l'implémentation de ces politiques ?	

Q6	Quel (s) est (sont) les programme (s) / projet (s) en lien avec l'agriculture l'alimentation et/ou la nutrition dans lequel (lesquels) vous intervenez?	Période	Zones intervention	Superficie couverte	Unité responsable
	1				
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
Q7	Pourquoi ce programme / projet ?	Pourquoi cette zone ?			
	1	1			
	2	2			
	3	3			
	4	4			
	5	5			
	6	6			
	7	7			
	8	8			
	9	9			
	10	10			
Q8	Dans le cadre de vos interventions, quel est le lien entre le système de production agricole, la consommation alimentaire et le statut de la sécurité nutritionnelle?				
Q9	Ce statut est-il satisfaisant? sinon, comment l'améliorer?				

## Objectifs des interventions

# Programme / Projet	Q10	Q11	Q12
	Objectif général / But ?	Objectifs spécifiques ?	Groupes cibles ? (Préciser si ciblés séparément ou dans un groupe plus large et comment)
1	-	- -	- --
2	-	- -	- -
3	-	- -	- -
4	-	- -	- -
5	-	- -	- -
6	-	- -	- -
7	-	- -	- -
8	-	- -	- -
9	-	- -	- -
10	-	- -	- -

## Activités et résultats

Numéro Programme / Projet	Q13	Q14	Q15
	Quelles sont les principales activités ?	Quels sont les résultats attendus / obtenus ?	Niveau de satisfaction des résultats ? (%)
1	- - -	- - -	- - -
2	- - -	- - -	- - -
3	- - -	- - -	- - -
4	- - -	- - -	- - -
5	- - -	- - -	- - -
6	- - -	- - -	- - -
7	- - -	- - -	- - -
8	- - -	- - -	- - -
9	- - -	- - -	- - -
10	- - -	- - -	- - -

### Education en agriculture, sécurité alimentaire et sécurité nutritionnelle

No question	Question	Réponse
Q16	Depuis combien votre institution intervient-elle dans l'éducation ?	
Q17	Quels sont les groupes cibles ?	
Q18	Y-a-t-il des groupes exclus ?	
Q19	Quels sont les messages véhiculés ?	
Q20	Quelle unité est en charge de l'éducation ?	
Q21	Quels sont les moyens utilisés pour faire passer les messages ?	
Q22	Les aspects cultureux, religieux, etc., sont-ils pris en compte dans la formation des consommateurs ? Exemples (préférences, préjugés, stigma, etc.)	
Q23	Avez-vous observé des changements dans les habitudes alimentaires ?	
Q24	Avez-vous des documents sur les changements observés ?	
Q25	Quel est le rôle des femmes dans l'éducation en rapport avec la sécurité alimentaire et la nutrition ?	
Q26	Pourquoi le choix des femmes dans l'éducation ?	

### Implication des femmes dans l'agriculture et les efforts pour la sécurité alimentaire et sécurité nutritionnelle

Numéro question	Question	Réponse
Q27	Quelles sont les principales organisations féminines impliquées ?	
Q28	En quoi consiste leur implication ?	
Q29	Leur engagement pourra-t-il s'intensifier dans le futur pour augmenter le lien entre l'agriculture l'alimentation et la nutrition ?	
Q30	Quel est le rôle des femmes dans le choix et/ou l'achat des aliments des ménages ?	
Q31	Quelle est l'importance des femmes en ce qui a trait à la contribution au revenu du ménage ?	

### Autres questions

Numéro question	Question	Réponse
Q32	D'après vous, quelles les interventions prioritaires pour améliorer le statut de la sécurité alimentaire et nutritionnelle dans le pays / dans la communauté ?	
Q33	D'après vous, existe-t-il de modèles pouvant être utilisés comme exemples au bénéfice des exploitants agricoles, en particulier des femmes ?	
Q34	Comment ces modèles pourraient-ils contribuer à améliorer le revenu, la consommation alimentaire et le statut de la sécurité nutritionnelle ?	
Q35	D'après vous, quel devrait être le meilleur modèle de coopération et de partenariat multidisciplinaire, intersectoriel et interministériel pour améliorer la sécurité alimentaire et nutritionnelle dans le pays ?	
Q36	Voyez-vous un problème quelconque dans la gouvernance, les investissements nationaux et l'émancipation des femmes ayant rapport avec la sécurité alimentaire et nutritionnelle ?	

## Annex B: Summary of questionnaire answers

### Targeting questions

#### Question 1

Question: Are there existing policies, and agriculture/nutrition programmes?

Answer: There are policies addressing agriculture, food and nutrition security issues in Haiti.

#### Question 2

Question: If yes, what are the major goals and objectives of these policies?

Answer: Their major goal is to guarantee food sovereignty and FNS.

#### Question 3

Question description: Are there any incentives for the implementation of these policies?

Answer: Sometimes some projects provide incentives to facilitate their implementation.

#### Question 4

Question: Are specific groups targeted (examples: women, children under 5 years)?

Answer: The policies try not to exclude any group. However, some programmes or projects can target specific groups, such as children under 5 years old and pregnant women, separately or together.

#### Question 5

Question: If yes, are they targeted separately or as part of a larger group (examples: household, mother and children, etc.)? How?

Answer: Usually children and mothers are targeted together.

### Institutional framework question

#### Question 6

Question: What are the existing governance structures (organisation, institution) working on FNS and agriculture? What are the linkages between/among them?

Answer: The main institutions working on FNS in Haiti are MARNDR and its structures, in particular, CNSA. MSPP is also involved and works in collaboration with MARNDR for nutritional aspects. Other ministries such as MPCE, MCI and MEF are involved and they meet together via cross-ministry platforms. International organisation acts as donors and provide expertise.



## Nutrition education/knowledge questions

### Question 7

Question: Is there a special unit in charge of nutrition education?

Answer: The Directorate of Nutrition is in charge of nutrition education. However, this task is not really implemented by this structure. Young people get basic nutrition education at primary school. Some radio broadcasts also provide some education. Some local organisations, such as MPP, educate the general population about nutrition.

Usually, cultural aspects are not considered in nutrition education.

### Question 8

Question: If yes, where is it located? In a ministry or in a university? Which one of the ministries/universities?

Answer: This structure depends on and is located in MSPP.

### Question 9

Question: If nutrition education services exist, do women have access to them? Are there any categories of the population who don't have access to these services?

Answer: Nutrition education services that exist in primary school, and through radio broadcasts and some local organisations are open to everyone. No social category of people is excluded.

### Question 10

Question: Is consideration given to the cultural context of food/dietary intake and nutrition in providing these services? For example, what is known about food preferences, prejudices, stigma, etc.? Have dietary patterns changed over the years? If yes, are the changes monitored/documentated?

Answer: No special attention is given to cultural aspects. Preference, prejudice and stigma towards food is not addressed.

Changes in dietary patterns have been observed recently. For example, in the past, Haitian people consumed more maize, sorghum, and roots and tubers but since 1986 people eat more rice, of which 80% consumed in Haiti is imported. These changes have not necessarily been documented and monitored.

### Question 11

Question: What is known about women's decision-making power regarding agricultural production? Food purchasing? Food distribution? Income generation within the home?

Answer: Women are the main decision-makers when it comes to purchasing foods and food distribution, but men are the main decision-makers regarding agricultural production and income generation.

## Information and knowledge management questions

### Question 12

Question: How are key messages on agriculture and nutrition communicated?

Answer: Key messages on agriculture and nutrition are usually communicated in meetings, face-to-face. When there is an important issue, such as a new pest attack, posters are displayed in public spaces and messages are broadcast on the radio. Some newspapers also cover the issue.

### Question Number: 13

Question: Who is in charge of communicating these messages?

Answer: Key messages on agriculture are usually managed and communicated by MARNDR extension services. Some local organisations and NGOs also manage and communicate messages on agriculture. Key messages about nutrition are managed by the MSPP Directorate of Nutrition and communicated by public health structures and radio broadcasts. Some local organisation and NGOs also manage and communicate messages on nutrition.

## Women's empowerment questions

### Question 14

Question: What are the major women's organisations involved in the development and implementation of agriculture and FNS programmes?

Answer: The two major women's organisations that exist in the country are SOFA and Fanm yo la. They are very active in social and political matters, but are not really involved in policies, programmes and projects addressing agriculture and FNS.

### Question 15

Question: What kind of involvement? Conception? Development? Search of funds? Funding? Implementation? Supervision? Others?

Answer: N/A

### Question 16

Question: Are there any opportunities to increase their engagement in future programmes or projects aimed at strengthening the agriculture-nutrition nexus?

Answer: They can get involved and play an important role, but maybe they need to be motivated on these issues.

## Overall questions

### Question 17

Question: What are the priority interventions for improving FNS outcomes in Haiti?

Answer: The priority interventions focus on increasing national agricultural production and the farmers' incomes. Six of the 15 PNSSANH strategic actions aim to boost national agricultural production: national recovery plan, reinforcement of border controls, rationalisation of the custom system, agricultural insurance, regulation of food production and trade, and an obligation for public institutions (health, PNCS, ministries) to purchase at least 50% of their food from local producers.

### Question 18

Question: What are the main characteristics of the agri-food system?

Answer: Agriculture, with animal husbandry, fisheries, and forestry exploitation contributes about a quarter of Haiti's annual GDP and employs about 60% of the population. However, it faces some problems. Farm sizes are small (about 0.62 ha) so the pressure on the agricultural land is high. Lands is overexploited due to soil, water, and forest degradation. Less than 30% of farmers use fertilisers, although since 2008 the government has provided financial support for these inputs up to 80%. About 10% of farmers have access to irrigation water. Natural disasters (in particular hurricanes, flooding, droughts, etc.) are recurrent and some areas of the country are highly vulnerable. Land conflicts discourage potential private investors. The financial system is weak. Research, technical support, agricultural extension and education service, agricultural and rural infrastructure are deficient. The proportion of the government's budget dedicated to the agriculture sector is low. There is also low availability of animal feed, resulting in low productivity. Pest attacks on plants and animals are poorly controlled and postharvest losses are high (about 35%). There are no standards and quality control systems, and market liberalisation (low tariffs, elimination of quantitative restrictions) is excessive.

The main crops are cereals (rice, maize, and sorghum), roots and tubers (yam, cassava, sweet potato, and potato), bananas and plantain, legumes (common bean and pigeon pea), and vegetables (cabbage, pepper, onion, carrot, and leek). The main animal species are horses, donkeys, mules, birds (chicken, duck, turkey, pigeon), pigs, sheep, goats, and cattle. Most households only keep a few livestock (about five birds, two goats, one pig, one sheep, one cow and one horse, ass or mule). Haiti has good fishery potential with 1,770 km of coastline and 22,000 ha of water bodies. About 3% of the population practice fisheries, however, fish production is low at about 16,000 t/year, of which 400 t is from aquaculture.

### Question 19

Question: What are the food/dietary intake and nutrition outcomes?

Answer: Food insecurity affects 38% of the population. A proportion of 23.44% of the under five children are affected by global chronic malnourishment. Severe chronic malnourishment affects 7.1% the under five children. A proportion of 4.1% of the under five children are affected by global acute malnourishment. The most affected departments by global acute malnourishment are Nord-Est (6.7%), Sud-Est (5.8%) and Nord (5.5%), while the less affected are Sud (1.9%), Centre (2.4%), and Nord-Ouest (2.8%). Severe acute malnourishment affects 1% of the under five children. Anemia affects 50% of the pregnant women and 70% of the under five children. Iodine deficiency affects 70% of the under five children. Hungry and/or malnourished people are mainly located in vulnerable communes of the departments of Nord-Ouest (low part), Sud-Est (Belle Anse district), Ouest (La Gonave Island), Artibonite (high part) and Centre (high part).

### Question 20

Question: What is the link between the agri-food systems and the food/dietary intake and nutrition outcomes?

Answer: About 60% of the population practices agriculture, but national food production only covers approximately 55% of the food needs. A 38% of the population is food insecure. The level of food insecurity is higher in rural areas (49.6%) than in urban metropolitan zone of Port-au-Prince (39.9%) and in the other cities (34.6%). Then, the rural areas are more at risks than the urban areas. Haiti is a diverse country in terms of agro ecological conditions. Its agro ecological diversity is favourable for diverse food production, but 77% of the population is in condition of non-satisfactory food security condition in terms of food diversity.

### Question 21

Question: What are the gaps and how can they be improved?

Answer: A large proportion of the population are food insecure (38%). Children under 5 years old are particularly affected by chronic malnourishment (23.44%), severe chronic malnourishment (7.10%), GAM (4.1%), SAM (1%), and anaemia (70%). Iodine deficiency affects 70% of 6-12 month olds, while anaemia affects 70% of pregnant women. These are big gaps.

Farmers need more support to raise their incomes, and produce enough food to nourish themselves and their family and increase national food production. In particular, they need more access to irrigation water, agricultural inputs, and agricultural extension and education services. Nutrition education services are also required to improve nutrition in Haiti.

### Question 22

Question: What are the existing models/best practices that benefit smallholder farmers, especially women, and how can they contribute to improving incomes, food/dietary intake and nutrition outcomes?

Answer: Some of the stakeholders that were surveyed felt that small farm sizes weaken the impact investment and capacity building has. Stakeholders suggested a land reform programme where farmers would be grouped in well-organised and well-trained associations and operate on larger farms. This would increase their capacity to gain investment, improve production, and access technical support. The case of Taiwan was mentioned as a potential model.

### Question 23

Question: What are the good/best practices for building multi-stakeholder, multi-disciplinary, inter-sectoral, and inter-ministerial cooperation and partnerships for improving FNS outcomes at a national level and for informing global processes?

Answer: Food insecurity is a transversal issue and not just an agricultural problem. All sectors and ministries need to cooperate to address it. Moreover, it seems that the problem of food insecurity in Haiti is not a question of availability because the food balance is usually positive (5.6% in 2005, 15% in 2007, and 13.72% in 2010), however the food balance is fragile because of large share of it is made up of food imports (51%). MARNDR needs to make more effort to boost local food production. There was consensus for building a multi-stakeholder, multi-disciplinary, inter-sectoral, and inter-ministerial platform to promote cooperation and partnership to improve national FNS outcomes. In Haiti, a platform involving different ministries exists, but this needs to be scaled up.

### Question 24

Question: Is there any issue at level of good governance, national ownership and women's empowerment related to FNS outcomes?

Answer: Government instability has had a negative impact on the implementation of FNS policies and programmes. Absence of agricultural insurance and credit, land tenure insecurity, land conflicts, and civil insecurity negatively affect private investment in the agriculture sector. Women are involved in food production, food distribution, and food preparation on an individual basis. Involving women's organisations could empower them and increase their impact. The absence of related specific laws was criticised during the workshop, highlighting the need for a judicial approach to solving FNS issues.

The Technical Centre for Agricultural and Rural Cooperation (CTA) is a joint international institution of the African, Caribbean and Pacific (ACP) Group of States and the European Union (EU). Its mission is to advance food security, resilience and inclusive economic growth in Africa, the Caribbean and the Pacific through innovations in sustainable agriculture.

CTA operates under the framework of the Cotonou Agreement and is funded by the EU.

For more information on CTA, visit **[www.cta.int](http://www.cta.int)**

**Contact us**

CTA  
PO Box 380  
6700 AJ Wageningen  
The Netherlands

**Tel:** +31 317 467100

**Fax:** +31 317 460067

**Email:** [cta@cta.int](mailto:cta@cta.int)

 [www.facebook.com/CTApage](https://www.facebook.com/CTApage)

 [@CTAflash](https://twitter.com/CTAflash)

