



THE REPUBLIC OF UGANDA

**OFFICE OF THE PRIME MINISTER**

**FINAL CAPACITY ASSESSMENT REPORT ON NUTRITION  
INFORMATION MANAGEMENT SYSTEMS**

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## ACRONYMS AND ABBREVIATIONS

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CAM	:	Capacity Assessment Matrix
CDOs	:	Community Development Officers
DHIS2	:	District Health Information System 2 (DHIS2)
DNCC	:	District Nutrition Coordination Committee
EU	:	European Union
FAO	:	Food and Agriculture Organization
FGDs	:	Focus Group Discussions
KIIs	:	Key Informant Interviews
GoU	:	Government of Uganda
MAAIF	:	Ministry of Agriculture, Animal Industry and Fisheries
MEMD	:	Ministry of Energy and Mineral Development
MoES	:	Ministry of Education and Sports
MoGLSD	:	Ministry of Gender, Labour and Social Development
MoH	:	Ministry of Health
MoTIC	:	Ministry of Trade, Industry and Cooperatives
NACS	:	Nutrition Assessment Counselling and Support
NIMS	:	Nutrition Information Management Systems
NPA	:	National Planning Authority
NIPN	:	National Information Platform for Nutrition
NIMS	:	National Information Management Systems
NPC	:	National Population Council
NITA-U	:	National Information Technology Authority –Uganda
NSDA	:	Nutrition Service Delivery Assessment
NRM	:	National Resistance Movement
SUN	:	Scaling Up Nutrition
OPM	:	Office of the Prime Minister
UBOS	:	Uganda Bureau of Statistics
UN	:	United Nations
UNAP	:	Uganda National Action Plan on Nutrition
UNICEF	:	United Nations Children’s Fund

## EXECUTIVE SUMMARY

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The Office of the Prime Minister (OPM) commissioned Empower Consult to conduct a capacity assessment for Nutrition Information Management Systems (NIMS) and develop a capacity development plan. This was in recognition of the lack of a sufficient understanding of the existing information management capacities and their associated gaps in the nutrition sub-sector. It is noted that the government of Uganda is promoting e-governance and open data as mechanism of improving, collection, processing and integration of data in decision making by various stakeholders. However, currently nutrition information management is largely uncoordinated and lacks an authoritative central repository for data from all sectors. Besides, data is currently insufficiently analyzed and interpreted to inform nutrition policy reviews and program development.

Therefore, the main objective of the assignment was to assess the existing nutrition information management systems capacities and establish the desired capacity as far as nutrition information management is concerned among various key stakeholders in the nutrition sub-sector.

### Methodology

In terms of approach, the Consultant employed mixed methods involving both qualitative and quantitative methods of data collection and analysis. Data was collected from both primary and secondary sources. In terms of framework of assessment, the consult adapted the Food and Agriculture Organization-Capacity Assessment Matrix (FAO-CAM) to assess the three dimensions of Capacity Development of nutrition information management in the four functional capacity areas. The three dimensions are; enabling environment, institutions and individuals. A total of 17 institutions covering MDAs, CSOs Academia, and Development Partners were engaged through face-to face interviews and self-administered questionnaire.

### Key Findings

- a) There exists political commitment and willingness at National and Institution level to facilitate development and implementation of effective nutrition information management systems. However, there is lack of clear incentives and mechanisms for various actors to invest in nutrition information management beyond their local institutional information needs for evidence based-decision making, policy reviews and programme design.
- b) The assessment revealed that multi-sector nutrition information management platforms are still in infancy and majority of key stakeholders about 80% are not active participants on this platform. There was no evidence of regular monitoring of these platforms, beyond the work of OPM and UBOS. The assessment confirmed that majority of institutions have internal processes and procedures for evidence based-policy development and planning that aspire to seek input from broader stakeholder

participation. However, most of these procedures are not implemented largely due to resource constraints.

- c) It emerged from the assessment that majority of the institutions assessed (about 90%) did not have a clear or distinct budget for nutrition information management. In majority of these organizations the roles of nutrition information management are; subsumed within ICT, M&E, statistics, social development and communication functions of the organization.
- d) While the UNAP clearly identified key stakeholders and broadly defined their roles, the assessment revealed that most key stakeholders don't have clearly defined areas at implementation level. For example, NITA-U indicated currently their roles are generic and limited to advise of use of e-governance architectures and ontology, NPA indicated that their current roles are largely observatory, yet they should lead the M&E component as the planning agency of government.
- e) The assessment revealed that there is limited guidance to support national and district levels in developing, implementing and monitoring multi-sector nutrition information management plans. For example, a number of systems like EMIS do not capture any of the 17 critical indicators of nutrition. While a number of national and sector level frameworks for guiding nutrition information management exist, majority about 75% of the individual respondents indicated not to be aware of at least 3 of the 5 national level frameworks.
- f) There are adequate skilled human resources at all levels in terms of ICT, communication and M&E. However, in terms of; numbers, competencies and awareness of nutrition information management, nearly 90% of the organizations lack capacity in nutrition information management.
- g) In majority of organizations (about 80%), there is no specific budget at central level and subnational level to support nutrition management systems to facilitate actions like; surveillances, dashboards, central repository etc.
- h) In all organization there exists information management infrastructure in form of hard and soft wares -computers, databases, telephone, equipment, transport which could be used to manage nutrition information. For example, NITA-U indicated underutilization of the NBI and data center by majority of state actors.
- i) The national nutrition coordination strategy exists as a setup by UNAP and operationalized under National Information Platforms for Nutrition (NIPN), which is coordinated by OPM with the data functions housed within UBOS. Majority of the institutions did not have clear coordination of nutrition actions with other stakeholders. However, sector working level groups such as Nutrition Technical Working Group (NTWG) do exist although overall engagement is not regular. Approximately 90% of the respondents indicated that the quality of engagement is lacking to meet the information management needs of the sub-sector.

- j) In terms of Partnerships, collaborations and alliances exist through the National Information Platforms for Nutrition (NIPN) Forum which brings together all key relevant sectors and stakeholders (government, civil society, Academia, business/private, UN/donor) in coordination forums. However, majority of stakeholders (nearly 85%) indicated that there is weak follow up and inadequate documentation of actions agreed during the forums.
- k) It was revealed that there is limited participation of other key stakeholders in this platform especially Academia and CSOs.
- l) Limited awareness about these forums and events among key stakeholders is evident.
- m) While M&E framework does exist at national level and to a greater extent institutional level, these existing nutrition information management systems are not integrated. It also emerged that while the NIPN defined 17 key nutrition information indicators, majority of these system do not capture all or most of the key indicators.
- n) The current reporting and dissemination approaches are not as effective as they should be. They are mainly limited to sector working group members by invitation. Also a few reports are published on website. It is also worth mentioning that important opportunities for improving the use of evidence for nutrition policymaking will arise as the Government of Uganda moves towards an integrated system for sectoral programme-based budgeting and monitoring, to include the analysis of sectoral input, output and budget data
- o) There is no clear tracking of progress and results at national and district level. Most of the key stakeholders like Academia, NPA, NITA-U and CSOs indicated limited input in the way of discussing reports to enrich the results uptake.
- p) The assessment revealed that national technical guidelines exist to guide nutrition service delivery at district level. However, there is limited awareness about them and their dissemination from national to district and also from district to sub-district levels.
- q) In terms of performance oversight of nutrition portfolios, the most comprehensive approach is embedded in the MoH supervision and monitoring by the DHO, through DHNIMS, Village Health Teams (VHT) among others.
- r) The MoH indicated to have about 30 nutritionists stationed at National Referral hospitals, who work with District Nutrition Coordination Committees to monitoring, evaluation and report district level nutrition targets within the District Development plans. With exception of MoH which has nutritionists and UBOS which has a statistician, majority of the personnel in other organizations have competences in information technology, communication and social development and their capacity to; collect, analyze and present nutrition data for decision making was reported to be limited. There is no clear mechanism of integrating refugee's health data within governmental monitoring systems.

### **Key capacity needs and responsible actors:**

- a) The Government of Uganda should enact a Nutrition Act and update the existing Nutrition Policy and associated instruments with the aim of harmonizing action among stakeholders and improving the generation, processing and use of nutrition information by various actors.
- b) There is need to conduct awareness among stakeholders of the existing policies, frameworks and guidelines on nutrition information management.
- c) There is need to strengthen the national nutrition information function at UBOS with frameworks and mechanism of accessing data from various stakeholders in real time
- d) There is need to develop a nutrition information management framework in line with the government e-governance architecture and open data initiative.
- e) A national nutrition ontology needs to be defined.
- f) Majority of stakeholders need to enhance staff capacity in data science and analytics to improve the processing and integration of data in decision making.
- g) There is need to provide incentives for stakeholders in the sector to enable their full participation.
- h) There is need to establish internal staff structures and procedures to promote collaboration and partnership across the Sector.
- i) Stakeholders need to take advantage of the NITA-U infrastructure capacity in management of nutrition data.
- j) Development of API's and data integration frameworks led by UBOS and NITA-U.
- k) Development of Decision Enhance Dashboards and Services.
- l) Harmonization of ontology and uptake of e-government framework.
- m) Definition of a specific budget vote at national and institutional level dedicated to nutrition information management.
- n) There is need to strengthen community-based initiatives such as VHT as a means of establishing a community-based nutrition data surveillance system and platforms for community-based information dissemination.
- o) There is need to enhance the role of NPA in NIPN as a means of enhancing uptake and integration of nutrition information in national policy and programmes. For example, the policy advocacy function could be managed by NPA.
- p) The roles of Academia and Private Sector need to be enhanced with a clear level of responsibility. For example, the annual research agenda could be a responsibility of the Academia within NIPN.



## 1.0 INTRODUCTION AND BACKGROUND TO THE ASSIGNMENT

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### 1.1 Introduction

The Office of the Prime Minister (OPM) commissioned Empower Consult to conduct a capacity assessment for Nutrition Information Management Systems (NIMS) and develop a capacity development plan. This is in recognition of the lack of sufficient understanding of the existing capacities and their associated gaps in the nutrition sub-sector as far as information management is concerned as further explained in the terms of reference (**Error! Reference source not found.**). This capacity assessment report, therefore, is the first of the three deliverables for the assignment. The report provides the assignment background and context, presents the objectives of the assignment, details the methodology used, discusses the assessment results, presents emerging conclusions and states the associated recommendations for various stakeholders.

### 1.2 Background and Context of the Assignment

According to World Health Organization (WHO) (2010c), food and nutrition security is a situation in which all people at all times have physical, social and economic access to food that is safe, consumed in sufficient quantity and quality to meet their dietary need. Access to quality and nutritious food is critical for a healthy, active life and productive human life.

Currently, there are a number of issues around accessibility of quality food. We noted that there is growing demand for food in part due to increasing world population, which is projected hit over 9.8 billion in 2050 (UN DESA, 2017). Furthermore, agricultural productivity is constrained by increasing limitation in access to natural resources such as water and land (OECD, 2015a). In addition, the rapid rate of urbanization in all countries is depriving agriculture sector of critical labor to work on farms. It is projected that, by 2050 approximately 66 percent of the world's population will live in urban areas, compared with 54 percent in 2014. Furthermore, studies continue to show that about 40 percent of water demand in 2030 is unlikely to be met, and more than 20 percent of arable land is already degraded (Bai *et al.*, 2008).

Thus, recognizing the need to streamline sub-sector coordination, the Government of Uganda through the Office of the Prime Minister (OPM) under the Nutrition Secretariat has developed plans and strategies that mainstream the nutrition agenda into the national development planning process. In 2011, the Government of Uganda launched the first multi-sectorial Uganda Nutrition Action Plan (UNAP) to address the high prevalence of malnutrition among women and children, which threatens the country's health, education, and socio-economic development potential. The main objective of the plan was to operationalize the Uganda Food and Nutrition Policy (UFNP) and the draft Food and Nutrition Strategy.

Under the 2011-2016 UNAP structure, the OPM was mandated to oversee and coordinate the scaling up of multi-sectoral efforts to establish a strong foundation for integration of nutrition information in Uganda's development plan. The government of Uganda recognizes that cross-sectoral and inter-agency collaboration is key in addressing malnutrition in Uganda. Thus, UNAP plays a big role in fostering actions to address sectoral priorities, e.g. those laid out in the Health Sector Strategic and Investment Plan and the Agricultural Sector Development Strategy and Investment Plan. With Multi-sectoral Nutrition implementation in hindsight, the UNAP recognized the need to institute and strengthen a national-level coordination framework and this was done by legally establishing the Food and Nutrition Council and its Secretariat housed under the OPM (proposed by the draft Food and Nutrition Bill). This Council, to-date is responsible for providing policy direction, guidance and oversight and also the over-arching coordination of the implementation, monitoring and evaluation of the UNAP as well as other nutrition programmes in Uganda.

In planning, policy and development, availability of accurate and timely information is key to enhance decisions making for various stakeholders. Accordingly, the establishment of robust information management systems has become a critical element in strategic planning and social development, especially for sub- sectors like nutrition. It is worth noting that, Information Management Systems (MIS) for nutrition have three main functions; capture data, provide data visualization and enhance information dissemination among stakeholders. Nutrition MIS's measure: changes in the nutrition status of vulnerable people, namely children and women; track progress in the implementation of actions and enhance decision making on prioritizing response.

For countries like Uganda which are participating in the SUN Movement, reliable monitoring of progress, evaluation of outcomes and demonstration of results are core functions. SUN countries are aiming to meet the six targets agreed at the World Health Assembly (WHA) in May 2012 by 2025.

As a strategy to achieve the six targets set for 2025, a number of countries are establishing robust information management systems to ensure; appropriate data is captured, processed and disseminated to various stakeholder and facilitate improved decision making and nutrition action programming. These MIS's are aimed at addressed information management challenges like variability in the quality and extent of information related to the targets. For example, data on birth weight are frequently inconsistent and unreliable because many women, particularly in poor rural areas, give birth at home sometimes without the support of a skilled birth attendant to capture current data. Key data on anemia in women of reproductive age are missing for most countries due to the rare implementation of micronutrient surveys. More importantly data management is constrained by lack of a unified framework of nutrition information management at national level.

Although there are a number of government information management systems in Uganda associated with nutrition, the country still suffers from uncoordinated; collection, processing and dissemination of nutrition information. It is worth noting that, there is no central repository for nutrition data from key sectors and actors like academia, and even the data which is currently held by various actors is insufficiently analyzed and interpreted to guide and inform nutrition policy development and programming.

Therefore, the National Information Platform for Nutrition (NIPN) aims at creating a platform to bring together existing information and data from all actors and sectors to support the development of evidence-based human nutrition policies and programmes. It is envisioned that, NIPN will enable a public sector-led platform to facilitate multi-sectoral and multi-stakeholder dialogue on nutrition and support the use of existing information and data to develop or refine policies and programmes. This initiative is seeking to contribute to the strengthening of national capacity to capture, manage analyze, and disseminate nutrition information to enhance strategic decision of various actors.

### **1.3 Justification for NIMS Capacity Assessment**

As observed in various reports (DURE Technology, 2019; Turcan and Bene, 2017; UNAP, 2011) and noted from the Terms of Reference (ToR) for the assignment, (**Error! Reference source not found.**), a large body of information is available on the nutritional status of the population and the factors that influence under nutrition. Studies continue to show that, Nutrition-related research is not coordinated through national or sector-based research agencies and information is not easily accessible for the purposes of informing policy formulation. It is noted that, the government of Uganda is promoting e-governance and open data as mechanism of improving, collection, processing and integration of data in decision making by various stakeholders. Through these initiatives largely spearheaded by The National Information Technology Authority Uganda (NITA-U). As such, a number of government information management systems in each sector has been established such as; IPPS for public service, IFMIS for finance, LOGIS for local government, and EMIS for education sector, among others.

It is observed that, non-state actors like Non-Governmental Organizations, Academia and Development Partners continue to generate a wealth of nutrition information and host independent information management system to meet their needs. Clearly, nutrition information management in the country is uncoordinated and lacks a central repository for data from all sectors, beside data is currently insufficiently analyzed and interpreted to guide policy formulation and program development. Yet, studies from other SUN countries show that improved nutrition information management at national and institution levels can significantly contribute to evidence-based planning and programme implementation resulting to optimal nutrition action results.

Given, the identified challenges of information management in the sub-sector, improved capacity is needed to increase the use of evidence in policy making, including the norms dictating the process, types of evidence and sectorial incentives for using evidence for decision-making. There is also need for knowledge “brokers” to help busy policy-makers, supporters and stakeholders to find and understand existing information.

## 1.4 Assignment Objective and Scope

The main objective of the assignment was to assess the existing nutrition information management systems capacities and establish the desired capacity as far as nutrition information management is concerned among various key stakeholders in the nutrition sub-sector. In terms of scope this assignment was restricted to assessing nutrition information management capacities of selected institutions which are key players in the nutrition sub-sector. Therefore, this report presents the capacity assessment of these stakeholders along the following dimensions; Governance systems (Policies, Programmes and Frameworks), Resources (human and financial), Functions, and infrastructure, Coordination, partnership and Evidence-based decision making.

## 1.5 Approach and Methodology for the Assignment

In terms of approach, the Consultant employed mixed assessment methods involving both qualitative and quantitative methods of data collection and analysis. Data was collected from both primary and secondary sources. In terms of framework of assessment, the Consultant adapted the Food and Agriculture Organization-Capacity Assessment Matrix (FAO-CAM) to assess the three dimensions of Capacity Development of nutrition information management in the four functional capacity areas. The three dimensions are: **a) Enabling environment**-(*Policy and legal framework, Policy commitment and accountability framework, National budget allocations, Governance and power*); **b) Institutions**-(*Mandates, Motivation and incentive systems, Strategic leadership, Inter/intra institutional linkages, Multi-stakeholder processes, Organizational Processes, systems and procedures, Human and financial resources, Knowledge and information sharing Infrastructure*); **c) Individuals** (Skill levels (technical and managerial skills), Competencies in relevant fields, Knowledge and attitudes in organization).

The framework was used to establish the current state of art and practice across the three Nutrition Information Management Systems (NIMS) capacity dimensions. Given the context of the assignment, respondents were purposively selected from key sectors and agencies that are known to contribute to promotion of good nutrition and management of nutrition information.

A total of 16 organizations including: *Ministry of Health (MoH); Ministry of Agriculture, Animal Industry and Fisheries (MAAIF); Ministry of Gender, Labour and Social Development (MoGLSD); Ministry of Local Government (MoLG); Ministry of Trade, Industry and Cooperatives (MoTIC); Ministry of Energy and Mineral Development; Ministry of Education*

and Sports (MoES); Office of the Prime Minister, National Planning Authority (NPA) and Uganda Bureau of Statistics (UBOS), European Union (EU), United Nations International Children's Emergency Fund (UNICEF), Women of Uganda Network (WOUGNET), School of Food Science and Technology Makerere University, Regional Universities Forum for Capacity Building in Agriculture (RUFORUM), and United States Agency for International Development (USAID) were engaged to provide the necessary information on current practices of nutrition information management and their gaps.

Letters of introduction to these organization was written by the OPM a copy attached in the annexes (**Error! Reference source not found.**) to accounting offices of these institutions. It is the accounting officers of these institutions who identified the most appropriate individuals within the organizations to respond to the structured tools of the study, which were administered to the respondents by a trained team of consultants. Furthermore, information on nutrition information management from these organization were sourced from secondary data, to further enhance the understanding of capacity needs.

The assignment was executed largely in three stages; 1) understanding and preparation stage – (*this involved synthesizing the purposes, selecting information sources, identifying respondents, developing tools, assembling the team among others*), 2) implementation – (*involved literature, conducting interviews and pre-processing of data*, 3) reporting – (*involved data interpretation and report writing resulting into two deliverables i.e. Capacity Assessment reporting and Capacity Development Plan* ).

The Consultant used a thematic content analysis approach to synthesize the data from both the primary and secondary sources in order to draw observations and conclusions in line with the capacity assessment framework. The synthesized matrices for respondent organizations are included in the Annexes (**Error! Reference source not found.**) below.

## 1.6 Report Structure

This report is organized in 5 sections. **Section 1** presents the introduction and background to the assignment; **Section 2** presents the findings and associated discussions of the capacity assessment along the four function areas of, *governance systems, resources, coordination and partnerships and evidence-based decision making*; **Section 3** presents the emerging conclusions from the capacity assessment and associated recommendations for various stakeholders. The report ends with references in **Section 4** and Annexes in **Section 5**.

## 2.0 NIMS CAPACITY ASSESSMENT FINDINGS

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This section details the findings of the capacity assessment. **Section 2.1** present the findings in the dimension of governance systems, **Section 2.2** presents findings in the area of resources, **Section 2.3** presents findings in the areas of coordination and partnerships and **Section 2.4** presents outcomes in the area of evidenced based decisions making.

### 2.1 Governance Systems (Policies, Programmes and Frameworks)

Governance systems were assessed at both National and Institution levels. At **National Level (20 instruments were reviewed)**, the governance capacity assessment revealed that the food and nutrition sub-sector development and associated information management is grounded at national level. At the core of these governance systems is the Constitution of the Republic of Uganda 1995, (amended) [1] with prescribes that, it is the mandate of government of Uganda to ensure food and nutrition security for all Ugandans. Thus, the first comprehensive approach to nutrition information management was grounded in the Uganda Food and Nutrition Policy, 2003 [2]. The Policy emphasized the strengthening of monitoring and tracking of nutrition information across sectors. To further address country's nutrition-related goals, the 5-year Uganda Nutrition Action Plan (UNAP) 2011–2016 [3], was developed and introduced with assistance from FANTA (Food and Nutrition Technical Assistance). FANTA strongly emphasized data management within the nutrition sub-sector. A summary of key governance systems at national level guiding the nutrition information management is provided below:

- a) Constitution of the Republic of Uganda, 1995 (as Amended)
- b) National Agricultural Policy (2013)
- c) National Development Plan II 2015/16-2019/20
- d) Uganda Vision 2040
- e) Agriculture Sector Strategic Plan 2015/16-2019/20
- f) Health Sector Strategic plan 2015/16-2019/2020
- g) National Nutrition Planning Guidelines for Uganda, 2016
- h) National Social Protection Policy (2015)
- i) Reproductive Maternal New-born Child Adolescent Health Sharpened Plan (2016)
- j) Programme Plan of interventions for implementation of the Uganda National Social
- k) Protection Policy 2015/16 – 2019/20
- l) National Integrated Early Childhood Development Policy and Action Plan (2016)
- m) Local Government Development Planning Guidelines (2014)
- n) The National Planning Authority Act (2002)
- o) Local Governments Act (1997)
- p) Sector Development Planning Guidelines (2015)
- q) A National Nutrition Policy successor to the UFPN of 2003 currently being drafted.
- r) Data Protection and Privacy Act, 2019
- s) Digital Uganda Vision, 2040

t) The National Information Technology Authority Uganda Act, 2009

It was observed that all these national frameworks have provisions concerning promoting the use of evidence-based policy and decision making. However, what they lack is clear and consistent framework for multi-sector and multi-actor data; collection, analysis and dissemination. Most national frameworks focused on data collected and managed by public sector organization and how weak provision of enforcing nutrition data management by private sector, civil society and academia.

**At Institutional Level:** Overall, **99%** of all the institutions assessed reported to have information management governance systems covering general information including nutrition information. Of these about **80%** reported to be using existing Government of Uganda policies and frameworks (national level governance systems) to manage their information and **10%** reported to having their own internal governance systems focused on nutrition information management. Majority of non-state actors revealed that they work within national policies that cascade down into their in-country specific policies that influence planning, implementation of activities and reporting on nutrition information. From the responses, it was revealed that two (2) Private Sector respondents, one (1) Academia, and two (2) Non-Governmental Organizations (NGO) indicated not to be aware of the national nutrition information regulatory environment.

Six (6) state actors and two (2) non-state actors (UNICEF, WFP) that constitute the Multi-sectoral nutrition framework reported to be using the Uganda Multi-sectoral Nutrition Action Plan (UNAP) framework as an over-arching guiding policy for their internal operation. This policy is used when planning for and eventually reporting on nutrition activities (nutrition sensitive, nutrition specific data).

While UNAP was fairly focused, it is important to note that the first UNAP expired in 2016 and new multi-sectoral nutrition coordination secretariat under the OPM is driving the production of the second UNAP which should lead to national nutrition policy. During this assessment, it was revealed that the Uganda Nutrition Policy is still being drafted by the concerned sector working group. The stakeholders who are not part of the Uganda multi-sectoral nutrition framework indicated to be using their internal generic policies to plan and report activities covering nutrition information management. Policies cited include; the ICT policies, communication policy, IT security policy among others.

**Data integration frameworks:**

As mentioned above, the stakeholders interviewed reported to having Monitoring and Evaluation (M&E) frameworks whose tenets focus on planning and reporting information relevant to nutrition. For the state and non-state actors that belong to the multi-sectoral nutrition platform, food and nutrition security information is one of the areas for data capture. Food and nutrition information, therefore, is one of thematic areas integrated in the overall framework. However, entities like NITA-U reported that, they don't have a

specific provision of capturing or disseminating nutrition information as a component in their M&E framework.

Furthermore, the state actors that belong to the multi-sectoral nutrition platform reported to having periodic food and nutrition technical working groups or committees that are responsible for; analysis, reporting and feedback on food and nutrition information. MAAIF and MoTIC reported having periodic engagements with UBOS on a technical working group. On the other hand, MoH, MAAIF and MoGLSD reported having periodic nutrition-related technical working groups engagements where planning and reporting are done. It was revealed that, UNICEF provided technical assistance to UBOS in ensuring the Uganda National Plan Survey has nutrition modules included etc. The assessment revealed that, non-state actors are invited to these platforms to provide technical assistance, resources (both human and financial) and also because their activities feed into these frameworks. The assessment of governance framework from each entity assessed is summaries **Table 1** below.

**Table 1: An integrated framework for Nutrition Information Management**

	Level	Laws and Policies	Programmes	Frameworks
NPA	Current	NPA Act, Constitution of the Republic of Uganda, Uganda Vision 2040, Uganda Food and Nutrition Policy 2003,	sector specific strategizes exists	Uganda Nutrition Action Plan 2011-2016,
	Desired	Enacting the Nutrition Act	Integrated data collection Support in policy harmonized and Policy awareness among stakeholders	National Framework for nutrition information management
MoLG	Current	As listed above	Sector Strategic plan MoH Nutrition Strategy Food and Nutrition strategy	National Framework for nutrition information management
	Desired	An updated Food and nutrition policy	Partner-led learning and collaborative events both at National and District levels	National Framework for nutrition information management
MAAIF	Current	- National Agricultural Policy - National Extension Policy - Communication policies (e.g. Communication development strategy, Agriculture information Strategy, Agriculture sector Knowledge	- Depends on policy frameworks under ICT - Data collection instruments as provided by the technical working groups for Food and Nutrition security and the	- e-based platform for nutrition information management (KOBO) - FUSINET - Geo-enabling (GPS) information system currently in 15 districts - Dietary Diversity scores for Nutrition assessments



	Level	Laws and Policies	Programmes	Frameworks
		Management and Communication strategy) - The UNAP	one for Food balance - Multi-Sectoral Project data collection in 1000 schools	- Food and Nutrition Security Vulnerability assessment
	Desired	Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms) so sector can align and report accordingly	Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms) so sector can align and report accordingly	Support training of M&E personal (in sectors) on the usage of data management packages
MoGLSD	Current	<ul style="list-style-type: none"> <li>- Uganda Nutrition Action Policy (<i>in review</i>)</li> <li>- Uganda Nutrition Policy (<i>draft</i>)</li> <li>- National Development Plan</li> <li>- Sector Development Plan</li> <li>- Social Protection Policy.</li> <li>- Integrated Early Childhood Policy</li> <li>- National Community Development Policy (<i>where the social development sectors fall</i>)</li> </ul>	<ul style="list-style-type: none"> <li>- Statistics</li> <li>- M&amp;E, Data Management</li> <li>- Information management</li> <li>- CDOs have received nutrition training</li> </ul>	- Computerized M&E tools for the single registry CDMIS; with modules
	Desired	Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms) so sector can align and report accordingly	<ul style="list-style-type: none"> <li>- Training on Food and Nutrition information management aspects critical for data capturing</li> <li>- Turn-over hence new recruits and the need for their training</li> </ul>	Operationalization and usage by the intended users (CDOs)
MoH	Current	<ul style="list-style-type: none"> <li>- Uganda Nutrition Policy</li> <li>- Uganda Nutrition Action Plan 2 (in development)</li> </ul>	<ul style="list-style-type: none"> <li>- MIYCAN</li> <li>- IMAM guidelines</li> <li>- Health Sector Strategic Plan (Nutrition is a section)</li> <li>- Comprehensive Nutrition Strategic Plan</li> </ul>	<ul style="list-style-type: none"> <li>Micro-nutrient Technical working group</li> <li>- Annual work plans (AWPs) have a component on M&amp;E</li> <li>- Working group on Food Fortification regulation and compliance to standards</li> <li>- Participation in the Integrated Food Security Classification (IPC) Phased assessment coordinated by MAAIF</li> </ul>

	Level	Laws and Policies	Programmes	Frameworks
	Desired	Approval of the policies - Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms)	Clear M&E frameworks and flow of information (Bottom to top and top to bottom)	-Ability to integrate information into the Multi-sectorial reporting platform (OPM) - Ability to access community information from the community. There is a gap as information is usually accessed up to the health facility
OPM	Current	<ul style="list-style-type: none"> <li>- Uganda Nutrition Action Plan (<i>in review</i>)</li> <li>- Uganda Nutrition Policy (<i>draft</i>)</li> <li>- National Development Plan 3</li> <li>- Sector Development Plans</li> </ul>	M&E systems in the sector Coordination of multi-sectors for nutrition implementation	<ul style="list-style-type: none"> <li>- DINU</li> <li>- PRDP 2</li> <li>- Northern Uganda Rehabilitation</li> <li>- Capitalizing and linking with other agencies e.g. UBOS</li> <li>- Technical working groups</li> <li>- Secretariat of sector working groups</li> <li>- District Nutrition Coordination Committees – DNCCs (At district level)</li> </ul> Heads of department meetings
	Desired	Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms) so sectors can align and report accordingly	<ul style="list-style-type: none"> <li>- Finalization of the UNAP with a clear M&amp;E framework (data to be captured, by who, when and dissemination mechanisms) so sector can align and report accordingly</li> <li>- M&amp;E systems that fully capture food and nutrition information</li> <li>- Identification of critical actors so that they are given follow up responsibilities</li> <li>- Data capture tools under development to be completed</li> </ul>	A well-established multi-sectoral working group to which these frameworks can be linked and report to
UNICEF	Current	<ul style="list-style-type: none"> <li>- Uganda Nutrition Policy</li> <li>- Uganda Nutrition Action Plan 2</li> <li>- Sustainable Development Goals (SDGs)</li> <li>- UNICEF Macro Nutrition Global strategies that</li> </ul>	<ul style="list-style-type: none"> <li>- NIPN Dashboard</li> <li>- Internal Nutrition Dashboard</li> <li>- Global Nutrition dash board</li> </ul> however these are	<ul style="list-style-type: none"> <li>- Technical assistance provided towards management of the HMIS</li> <li>- Surveys conducted in collaboration with the government</li> </ul>

	Level	Laws and Policies	Programmes	Frameworks
		feed into the Country development plan	populated to a country's draft.	
	Desired	- Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms) so WFP can take on aspects	Involvement of the Nutrition Multi-stakeholders in the process	
WFP	Current	- Uganda Nutrition Policy - Uganda Nutrition Action Plan 2 (in development) - Sustainable Development Goals (SDGs)	- Scope Coder - Karamoja Social Registry - Program Management Info system (PROMISE) COMET (HMIS review after 5 years)	- Support Implementation through Integrated Management of Malnutrition using scope CODA (used to improve quality of IMAM data). - Karamoja Social registry
	Desired	- Approval of the policies by the Government - Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms) so WFP can take on aspects	Involvement of the Nutrition Multi-stakeholders in the process	Eventual uptake by the Government
UBOS	Current	N/A	Not known	
	Desired	A permanent staff	Web based dash boards, workshops, trainings in data science and nutrition information management	

In conclusion;

- a) The assessment revealed the existence of a political commitment and willingness at National and Institution level to facilitate development and implementation of effective nutrition information management systems. However, there is **lack of clear incentives and mechanisms** for various actors to invest in nutrition information management beyond their local institutional information needs for evidence based - decision making, policy reviews and programme design.
- b) The assessment revealed that multi-sector nutrition information management platforms are still in infancy and majority of key stakeholders **about 80% are not active participants** on this platform. There was **no evidence of regular monitoring** of these platforms, beyond the work of OPM and UBOS. The assessment confirmed that **majority of institutions** have internal processes and procedures for evidence based- policy development and planning that aspire to seek input from broader

stakeholder participation. However, most of these procedures are not implemented largely due to **resource constraints**.

- c) It emerged from the assessment that majority of the institutions (**about 90%**) did not have a **clear or distinct budget for nutrition information** management. In majority of these organizations the roles of nutrition information management are; subsumed within ICT, M&E, statistics, social development and communication functions of the organization.
- d) While the UNAP clearly identified key stakeholders and broadly defined their roles, the assessment revealed that most key stakeholders **don't have clearly defined areas at implementation level**. For example, NITA-U indicated currently their roles are generic and limited to provision of advice on use of e-governance architecture and ontology, NPA indicated that their current roles are largely observatory, yet they should lead the M&E component as the planning agency of government.
- e) It was revealed that there is **limited guidance to support** national and district levels in; developing, implementing and monitoring multi-sector nutrition information management plans. For example, a number of systems like **EMIS** do not capture any of the **17 critical indicators** of nutrition. While a number of national and sector level frameworks for guiding nutrition information management exist, majority of respondents about **75% of the individual respondents indicated not to be aware** of at least 3 of the 5 national level frameworks.

#### **Key capacity needs and responsible actors:**

1. Enacting of Nutrition Act by Government of Uganda.
2. Updating of the Nutrition Policy by OPM.
3. Harmonization of strategies among actors and definition of clear roles for stakeholders by OPM and NPA.
4. Increasing awareness of existing policies and frameworks among stakeholders by OPM.
5. Defining key universal indicators for nutrition information management and a shared ontology by NITA-U.

## **2.2 Technology, Human and Financial Resources**

According to the National Information Platforms for Nutrition (NIPN) there are approximately **17 key indicators of nutrition data** that need to be captured by the nutrition systems. The study on Uganda National Information Platforms for Nutrition (NIPN) 2018, an initiative of the European Commission highlighted the status of nutrition information management in Uganda. The report observed that a number of systems in the Nutrition sector do exist but majority of them do not capture the key indicators of

nutrition because they are not **fully operational** and the due to lack of a **harmonized legal framework and enforcement mechanism for nutrition data management**.

### **2.2.1 Technology-Data capture strategies and Information Management Systems**

The results of the assessment revealed that, about **45%** of the entities surveyed reported having some form of a data management or **an Information and Communications Technology (ICT) policy** which guides the; collection, processing and dissemination of nutrition related information in general. However, majority of the organizations surveyed indicated they lack a specific policy on nutrition information management, and they rely on existing institutional M&E frameworks, which do not adequately address core challenges of nutrition information management such as; **access to partner information, timely analysis and visualization, sharing of data and use of information in decision making**.

The assessment reviewed that, each of the entities assessed have some nutrition data capture frameworks which are **both paper-based and e-enabled**. All institutions indicated their desire to transition **to electronic means** of nutrition information management reflected on the benefits such as; **time access to information, improved data quality, improved data visualization and usage in decision making, improved information sharing among stakeholders among other benefits**. For the state actors, a number of the electronic based systems have been set up mainly with the support from Development Partners. It was also noted that NITA-U has a number of platforms which are still under-utilized by state actors in support for nutrition information management, for example the **National Data Centre and the National Backbone Infrastructure** remain underutilized by stakeholders.

It emerged from the assessment that in terms of technology platforms, most of the electronic systems being used by stakeholders **are open source systems (OSS)**. Most of the systems are information management systems (MIS) which house the data. Users are granted access to extract information and utilize it on need basis. For example, **Ministry of Health has the Health Management Information System (HMIS)** at the national Level and the local governments have District Health Information Management Systems (**DHIS2**) at the district Level. The Ministry of Agriculture, Animal Industry and Fisheries has **“KOBO”**; a geo-enabling electronic based platform for nutrition information management which plugs into (Famine Early Warning Systems Network) FEWS-NET to provide food security information. For the Ministry of Gender, Labor and Social Development (MoGLSD) has a **single-entry registry (database)** for social protection (to harmonize and coordinate information management within the social protection sector). The Ministry of Education has the Education Management Information System (**EMIS**) which captures generic data about education service delivery with very limited information on nutrition. The National Planning Authority (NPA) does not have a specific system for nutrition information management and relies on reports and data from other stakeholders. Currently **NPA does not independently capture any nutrition data**, but

rather accesses data from other stakeholder’s especially state actors like; UBOS, the National Population Council, and MoH among others. At **NITA-U there is no specific system that provides computing platforms** and infrastructure upon which other state actors can house their systems. It is worth noting that **NITA-U has capacity** to support other actors in the nutrition sector to building open source systems, develop APIs to integrate various and build dashboards for data visualization and enhanced decision making. It is important to note that most of the **data analysis is still done via excel and basic office** applications. The lack of data analysis capacity for nutrition in various organization is the due to weak institutional need for nutrition information in decision making, lack of budget to support nutrition data management among others.

From stakeholder engagement the following are some of the key MIS support nutrition action in Uganda (**Error! Reference source not found.**).

**Table 2: Key MISs for Nutrition information Management**

System name	Functionality
<b>Uganda Integrated Nutrition Information System (UINIS-2010)</b>	The system can be conceived to host integrated at national level on nutrition and provide real time updates on the health and nutritional status of Ugandans. The system to was to operations key provisions of the Uganda Nutrition Action Plan to enable evidence-based nutrition policy and program design. The system is not yet operational and the status of development was not provided.
<b>Health Management Information System (HMIS) on DHIS2 platform</b>	HMIS operated at national level by MoH and DHIS operated at Local Governments at district level does capture community-based nutrition data.
<b>Famine Early Warning Systems Network (FEWS NET))</b>	Early warning and analysis on food insecurity.
<b>Water Management Information System (WMIS)</b>	Data from this system is used in the Uganda Early Warning System as well
<b>SCOPE and SCOPECODA</b>	It is a beneficiary IT system for Integrated Management of Acute Malnutrition. It merges identity management with program management to register, track and manage individuals who are treated for acute malnutrition through CMAM (Community based Management of Acute Malnutrition) programming.
<b>Infotrade</b>	The Agricultural market information system built to integrate collection, analysis and dissemination of agricultural and other market Information in Uganda.

As stated by the IT person at NPA:

*“It would be nice to have a central repository of this nutrition information in form of rows, data sets and reports so that stakeholders can contribute their data in return to accessing the data they don’t have”*

Another respondent noted that:

*“Indeed, there is duplication of efforts, especially when stakeholders don’t access data from each other especially from Academia”*

From the stakeholder engagement and review of existing literature, it was very clear that, currently nutrition information is largely managed in **form of silos** and largely shared among partners **through reports** but not **raw data**. However, UBOS and NPA do provide access to raw data on demand basis to researchers and other partners, but these data sets are limited to data collected by UBOS. Furthermore, the procedure of accessing the data is tedious and often time discouraging as indicated by the Academia and CSOs.

As noted by a respondent from Civil Society Organization:

*“I tried to access current data from government agencies on household nutrition and I was not successful and it appeared to me, government does not have authentic data on household nutrition of the country”*

The **Error! Reference source not found.**] provides a summary of some of the information management systems managing Nutrition information in the sub-sector.

**Table 3: Overview of the nutrition information management systems in Uganda, August 2019**

System name	Scale of rolling out	Data last updated	Individual/agggregated	Hosted at	Data Access	Which Ministry/Dept. developed it	Current status	Indicator coverage (17 SUN MEAL ones)
UNIMS	n/a	n/a	n/a	n/a	n/a	n/a	Never got implemented	None
HMIS	National	Currently being revised and updated	Aggregated	Cloud	MOH and selected partners	MOH. Dept. of Planning, Resource Centre	Implemented	4 out of 17 SUN MEAL indicators
EMIS	national	Unknown	Unknown	Unknown	Restricted	Education Planning Dept., MoES	Implemented	None
LOGICS	Un known	Unknown	Unknown	Unknown	Unknown	Ministry of Local Government (MoLG)	implemented	None
SCOPE and COSA	Pilot	2018	aggregated	Out of Country	WFP	MOH with support from WFP	Implemented	None
Crop Monitor for AMIS and Early Warning	National	unknown	Aggregated	Unknown	Restricted	National Organisations Monitoring Crop conditions	Implemented	None

Info Trade	Major District	n/a as supposed to be real time	Aggregated	Within Country premises	Restricted	FIT U Ltd. In Partnership with Agricultural Sector Program Support	Implemented	None
STAT Compiler	National	2016 ( upto last DHS Survey)	Aggregated	Out of Country	unknown	USAID	Implemented (recently in 2018)	10 out of 17 SUN MEAL indicator

## 2.2.2 Human Resources

All the entities surveyed reported having **staff employed** to handle information management and communication in general, including nutrition information. The individuals in these organizations handling nutrition information are largely from; **ICT, Communication and M&E departments**. For example, at NPA the role for managing nutrition information is shared between; Social Development, ICT and communication units. At the MoH it was established that, the ministry has 4 statisticians are deployed as M&E officers to handle nutrition related information, these are complimented by 30 nutritionists based at referral hospitals, who are charged with capturing nutrition indicators in the hospital.

The analysis of multi-sectoral nutrition platform actors revealed that; M&E and ICT staff are normally assigned the responsibility of collecting and reporting on food and nutrition indicators. While most institutions acknowledged the need of complete and accurate nutrition information, most stakeholders did not have a complete formal matrix of indicators to be captured on nutrition. What emerged is that most indicators are developed on **case-by-case** and are often **driven by donor funding**. Hence, the lack of a complete and coherent nutrition data base. It was observed that most organizations which have ICT staff are in change of networks and systems support and have limited skills in areas of; research, data analysis and data science. Besides, these staff also report on other thematic areas relevant to each entity. The **Error! Reference source not found.** below provides a summary of human resource assessment of the institutions which participated in the study.

**Table 4: Summary of Human Resource Assessment**

Entity	Staff (Number and Roles)	Relevant Skillsets and competencies
MoH	4 M&E Officers (statisticians) About 30 Nutritionists situated at the National Referral Hospitals and sit on the respective District Nutrition Coordination Committees	- Statistics - M&E, Data Management - Reporting - Communication - Nutrition management
UBOS	7 M&E Officers, 1 Communication office and a number of ICT staff	- Data Science - M&E, Data Management - Reporting and Communication - Information Management Systems - cyber security



Entity	Staff (Number and Roles)	Relevant Skillsets and competencies
<b>MoLG</b>	3 M&E and ICT Officers charged with management of information management systems. These are in theory are expected to collaborate with ICT officers at local governments to access the necessary information	<ul style="list-style-type: none"> <li>- M&amp;E, Data Management</li> <li>- Reporting and Communication</li> <li>- Information Management Systems</li> </ul>
<b>MOGLSD</b>	The department under which nutrition is situated has 11 officers that directly work with 134 District Community Development Officers (CDO) and 41 Municipal Officers.	<ul style="list-style-type: none"> <li>- Statistics</li> <li>- M&amp;E, Data Management</li> <li>- Information management</li> <li>- Community mobilization</li> <li>- Nutrition</li> </ul> <p>CDOs have received nutrition training Community mobilization</p>
<b>NPA</b>	2 ICT officers, 1 social development and 2 M&E staff	<ul style="list-style-type: none"> <li>- Statistics</li> <li>- M&amp;E, Data Management</li> <li>- Information management</li> <li>- Social Development</li> <li>- Policy Analysis</li> </ul>
<b>WFP</b>	Scope Coder personnel (5; 1 in the field and at national level) M&E Unit of which Nutrition is a component Karamoja Social Registry team of which nutrition is a component (Numbers not provided)	<ul style="list-style-type: none"> <li>- M&amp;E, Data Management</li> <li>- Data Analyst</li> <li>- Innovations</li> <li>- Reporting</li> <li>- Communication</li> </ul>
<b>MoTIC</b>		
<b>OPM</b>	NIPN focal person UNAP coordination unit of 4-5 personnel (these perform other OPM duties)	<ul style="list-style-type: none"> <li>Statistics</li> <li>Policy Analysis</li> <li>Nutrition programming</li> <li>M&amp;E</li> <li>Advocacy and networking</li> </ul>
<b>MAAIF</b>	Senior Agricultural Officer for food and nutrition security M&E staff in the different divisions that are called upon to provide food and nutrition security related information ICT unit staff in the different divisions	<ul style="list-style-type: none"> <li>Statistics</li> <li>M&amp;E, Data Management</li> <li>Information management</li> <li>Knowledge management and communication</li> <li>Surveillance</li> </ul>
<b>NITA-U</b>	Have a directorate of research Have an IT Services staff	<ul style="list-style-type: none"> <li>Systems and Networks</li> <li>Cyber Security</li> <li>Requirement engineering</li> </ul>
<b>UNICEF</b>	1 NIPN focal person M&E Unit of which Nutrition is a component	<ul style="list-style-type: none"> <li>Statistics</li> <li>M&amp;E, Data Management</li> <li>Data Analyst</li> <li>Innovations</li> <li>Reporting</li> <li>Communication</li> </ul>
<b>WOUGNET</b>	3 people	<ul style="list-style-type: none"> <li>Communication</li> </ul>

Entity	Staff (Number and Roles)	Relevant Skillsets and competencies
		Computer systems and networks
<b>ROFURM</b>	3 people including; IT staff, knowledge management and scholarship unit	Communication Computer science Networks Databases

From the study, it was established that a number of entities had recruited staff that; manage and support information management systems including; collection, analysis, communication and management of nutrition information. However, some institutions indicated that the staff handling nutrition information are not nutritionists and **don't have** basic food and nutrition knowledge. This could compromise their appreciation of the data processes which are important for improved data management and reporting to enhance decision-making.

The ideal situation would be for these entities to recruit nutritionists as part of M&E and ICT teams, which have the required data and information management skillset. Furthermore, most institutions **do not have data scientists within** their teams to support synthesis of information and its visualization for improved decision making.

### 2.2.3 Financial Resources

In terms of financial resources, nearly **90% of the organizations** assessed indicated not having a specific budget for nutrition information management, but rather nutrition information management is **funded within the block functional** units. Most of the funding associated with nutrition information management is directed at; **core staff costs, internet and little on technology and data process management.**

In conclusion,

- a) There are adequate skilled human resources at all levels in terms of **ICT, communication and M&E.** However, in terms of; numbers, competencies and awareness of nutrition information management, nearly **90% of the organizations lack capacity in nutrition information management.**
- b) In majority of organizations (about 80%) there is no specific budget at central level and subnational level to support nutrition management systems to facilitate actions like surveillances, dashboards, central repository etc.

- c) In all organization there exists information management infrastructure in form of hard and soft wares -computers, databases, telephone, equipment, transport which could be used to manage nutrition information. For example, NITA-U indicated underutilization of the NBI and data center by majority of state actors.

#### **Key capacity needs and responsible actors:**

1. Increase awareness of resources at NITA-U among stakeholders by NITA-U.
2. Development of API's and data integration frameworks by UBOS.
3. Development of Decision Enhance Dashboards and Services by NITA-U and UBOS
4. Harmonization of ontology and uptake of e-government framework by NITA-U.
5. Definition of a specific budget vote at national and institutional level dedicated to nutrition information management by NPA and Ministry of Finance, Planning and Economic Development.
6. Recruitment or designation of dedicated officers for nutrition information management within organizations by management of concerned entities.
7. Training of staff in nutrition information by NIPN secretariat at OPM.

### **2.3 Coordination and Partnership**

At a strategic level a coordination structure was defined under the Uganda Nutrition Action Plan 2011 [3], the NIPN policy component is housed within the Office of the Prime Minister (OPM), charged with the responsibility of overall coordinator and monitoring of the national multi-sectoral nutrition policy. The data and information management function is currently provided by Uganda Bureau of Statistics (UBOS). UBOS implements and is supported with technical assistance from UNICEF Uganda. It was observed that **the role of NPA, within the coordinator structure is limited** yet NPA plays a critical role in policy development and planning for the country.

Also, it was observed that the roles of **Academia and CSO are very limited** yet they contribute a lot on data collection and dissemination. The institution surveyed reported having some forms of **M&E frameworks that consisted of planning and reporting for relevant thematic areas**. For the state and non-state actors that belong to the multi-sectoral nutrition platform, food and nutrition security information is one of the areas for data capture, however **their indicators are not harmonized** but largely informed by their institutional needs. Entities like NITA-U didn't report having food and nutrition as a component in their M&E Framework. Furthermore, the state actors that belong to the multi-sectoral nutrition platform reported having periodic food and nutrition technical working groups/committees that are responsible for analysis, reporting and feedback on food and nutrition information. MAAIF and MoTIC reported having periodic engagements with UBOS on a technical working group. MoH, MAAIF, MOGLSD reported having periodic

nutrition-related technical working groups or committees where planning and reporting are done.

As noted by one respondent from MoTIC:

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*“We regularly interact as working group to learn new developments in the sector”*

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UNICEF provided technical assistance to UBOS in ensuring the Uganda National Plan Survey has nutrition modules included among others. The non-state actors are invited to these platforms to provide technical assistance, resources (both human and financial) and also because their activities feed into these frameworks. This is often done on need to know basis. There is need to identify key non-state actors like academic and provide them with greater roles in nutrition information management.

In conclusion;

- a) The national nutrition coordination strategy exists as a setup by UNAP and operationalized under National Information Platforms for Nutrition (NIPN), which is coordinated by OPM with the data functions housed within UBOS. **Majority of the institutions did not have clear coordination of nutrition actions with other stakeholders.** However, sector working level groups such as Nutrition Technical Working Group (NTWG) do exist although overall **engagement is not regular.** Approximately 90% of the respondents indicated that the quality of engagement is lacking to meet the information management needs of the sub-sector.
- b) In terms of Partnerships, collaborations and alliances, exist through the National Information Platforms for Nutrition (NIPN), forum which brings together all key relevant sectors and stakeholders (government, civil society, Academia, business/private, UN/donor) in coordination forums. However, majority of stakeholder nearly 85% indicated that there is **weak follow up and inadequate documentation of actions** agreed during the forums.
- c) It was revealed that there is **limited participation of other key stakeholders** in this platform especially Academia and CSOs.
- d) **Limited awareness** about these forums and events among key stakeholders is evident.

**Key capacity needs and responsible actors:**

1. The Secretariat of NIPN should create more awareness on the collaboration frameworks and events among stakeholders.
2. The need to provide incentives by OPM and NIPN to stakeholders in the sector to enable their full participation.
3. The need to establish internal staff structures and procedures to promote collaboration and partners across the sector by all stakeholders especially OPM.

## 2.4 Evidence-based Decision Making

All key informants (100%) reported that evidence is important for policy and programme formulation because it can guide the decision-making process and facilitate the mobilization of resources for data production. However, about **80% of the key informants indicated there are gaps between the type of nutrition information available and the information needed** for their decision making. The assessment revealed that, a lot of data and information about nutrition is collected by various actors especially the Civil Society Organizations (CSOs) and Academia, but this data is not easily accessible to other key stakeholders, i.e. **data is held in silos**. This due to lack of clear incentive mechanism to share data among stakeholders.

One respondent at NPA said:

*“the school of public health is conducting cutting edge research in the areas of nutrition, but access to their raw data is currently limited, besides there have no incentive of depositing their data or report to a central repository. There is a need to provide a central repository for nutrition information and give incentives for stakeholders to submit information”.*

Besides existing nutrition data being limited, the capacity among stakeholders to analyze this data varies significantly, with exception of UBOS, MOH, OPM and MAAIF where about 75% of the institutions indicated lack of capacity to effectively analyze the data for enhanced decision making. It is not surprising that only UBOS seems to have sufficient staff with competencies in data analysis. Most institutions assessed lack data scientists and have no detailed plans, tools and procedures for integrating evidence into various stages of decision and policy making.

National level core systems like; the Integrated Financial MIS (IFMIS) and Output Budget Tracking do provide sectorial budgeting data however, **nutrition-related allocations are not well captured to enable equity budget tracking**. It was revealed that the Office

of Prime Minister is at advanced stages of deploying comprehensive integrated government programmes monitoring and evaluation information management systems inclusive of input, output and budget data. This approach will **provide new opportunities to integrate information for nutrition**. It is hoped that this system will have a number of dashboards to facilitate integration of nutrition information in decision making. These efforts are in line with the government's e-government policy and the NRM manifesto 2016-2021.

Indeed, given the current situation, a comprehensive, robust means to collect existing sectoral and inter-sectoral data on nutrition for analysis to provide nutrition information to decision-makers at all levels of government for policy development and programme planning. **A deeper analysis of the information needs of decision-makers would be a useful starting point**. Currently, there is **lack of a framework of information needs for various decision makers** as far as nutrition policy and programme design is concerned.

In conclusion,

- a) While M&E framework does exist at national level and to a greater extent institutional level, these existing nutrition information management **systems are not integrated**. It also emerged that while the NIPN defined 17 key nutrition information indicators, majority of **these systems do not capture all or most of the key indicators due to lack of enforcement mechanism**. It emerged from the assessment that, from output-based budgeting system, nutrition targets are reflected in sector/district strategies/plans and allocation done to some key players especially MoH and OPM. Mechanism for collecting, reporting and analyzing data on nutrition-specific and nutrition-sensitive indicators on a regular basis (e.g. surveys, surveillance) is limited to UBOS. Majority of the state actors interviewed indicated that, indeed nutrition data is key in formulation of policies and Programmes especially by MoH, health facility level, district local government, MAAIF, NPA and OPM). It was revealed that UBOS maintains a database on nutrition indicators which can be accessed by partners, however there was **no clear mechanism of how, data from surveys, assessments and information management systems of other stakeholders is integrated into the UBOS database**. There are **no dashboards for partners and governmental institutions on this database with exception of a generic public access portal**, which is limited to basic data which often times is outdated.
- b) The current reporting and dissemination approaches are not as effective as they should be. They are mainly **limited to sector working group members by invitation**. Also a few reports are published on website. It is also worth mentioning that important opportunities for improving the use of evidence for nutrition policymaking will arise as the Government of Uganda moves towards an integrated

system for sectoral programme-based budgeting and monitoring, to include the analysis of sectoral input, output and budget data.

- c) There is **no clear tracking of progress and results at national and district level**. Most of the key stakeholders like Academia, NPA, NITA-U and CSOs indicated limited input in the way of discussing reports to enrich the results uptake.
- d) The assessment revealed that national technical guidelines exist to guide nutrition service delivery at district level. However, there is **limited awareness about them and their dissemination** from national to district and also from district to sub-district levels.
- e) In terms of performance oversight of nutrition portfolios, the most comprehensive approach is embedded in the MoH supervision and monitoring by the DHO, through DHNIMS, Village Health Teams (VHTs), among others.
- f) The MoH indicated to have about 30 nutritionists stationed at National Referral hospitals, who work with District Nutrition Coordination Committees to monitoring, evaluation and report district level nutrition targets within the District Development plans. With exception of MoH which has nutritionists and UBOS which has a statistician, majority of the personnel in other organizations have competences in information technology, communication and social development and their capacity to; collect, analyze and present nutrition data for decision making was reported to be limited. There is no clear mechanism of integrating refugee's health data within governmental monitoring systems.

#### **Key capacity needs and responsible actors:**

1. The Secretariat of NIPN should create more awareness and collaboration frameworks as well as events among stakeholders.
2. NIPN and OPM need to establish an information needs framework from various stakeholders to guide the development of indicators, data integration and visualization services.
3. NIPN needs to provide incentives for stakeholders in the sector to enable their full participation.
4. Need to establish internal staff structures and procedures to promote collaboration and partners across the sector.

## **2.5 NIMS Best Practices in Other Countries**

In the various Scaling up Nutrition (SUN) countries like Ethiopia, Rwanda, Madagascar, Zimbabwe and Sri Lanka among others, information management systems exist in some form. Different countries have developed their own unique techniques to strengthen their approaches to management of nutrition information.

### **2.5.1 Governance Systems (Policy, Programmes, Frameworks)**

- a) Establishment of a **clear policy on nutrition and nutrition information management**
- b) Establishment of a clear and well-structured national coordination framework. Similar to Uganda, Madagascar established the National Nutrition Council (NNC) within the office of the prime minister to coordinate the nutrition information management and programmes across sectors and stakeholders.
- c) Annual joint action plans by various actors which are centrally coordinated are key for successful management of nutrition information. In Rwanda this is coordinated by National Coordination Committee to Eliminate Malnutrition (NCC) supported by the Nutrition Technical Working Group on Nutrition co-chaired by the Ministry of Health together with USAID.
- d) Establishment of robust M&E systems with clear indicators and structures of information capture and reporting. Definition of national nutrition information resulting in communication frameworks.
- e) Definition of common ontology of nutrition information.

### **2.5.2 Resources (human, financial and infrastructure)**

- a) Infrastructure and human capacity development at all levels is a pre-requisite for successful nutrition information management.
- b) Use of lower cost and available technologies like rapid SMS and mobile apps is effective in information capture and dissemination. For example, the SMS mobile phone-based system designed to continuously track the pregnancy cycle in Rwanda.
- c) Use of automated information management systems to ensure harmonized timely capture of data.
- d) Stakeholder ownership of the systems is key as demonstrated by successes in Madagascar and Rwanda, where nutrition information system is based on the ownership of the system at all levels.
- e) Grassroot based communities of volunteers such as VHT can play a critical role in timely update of nutrition information district and national database but also for effective dissemination of nutrition information to end users for their enhanced decision making.
- f) Capacity building at community level is key for sustainable nutrition information management of a country.
- g) Development of data integration Application Program Interfaces (API's) are key in enabling data integration from multiple stakeholders.



- h) Use of community health workers to relay real-time information is a successful approach especially if based at health facilities.
- i) Use of mobile, web and dashboard technologies in the capture, analysis and visualization of nutrition information to improve utilization of data by various stakeholders.

### **2.5.3 Coordination and Partnerships**

- a) Coordination in data collection is principal. Uncoordinated data collection or reliance on a single source is not only a waste of resources but contribution to overload, poor quality, gaps, misinterpretation and delays in proper analysis of data.
- b) Establishment of a central nutrition information management coordination unit, like UBOS in case of Uganda is key for success management of nutrition information.
- c) Regular well-structured, participatory multi-sectorial engagements which allow debates and collective decision making. This enhances up take of nutrition information in policy and programme design.
- d) Building clear incentive framework for all stakeholder in the nutrition eco-system is key for sustainable nutrition information management.

### **2.5.4 Evidence-based Decision Making**

- a) One of the critical success factors highlighted from other countries is participatory monitoring and evaluation of results by all stakeholders.
- b) Adopting and adapting international guidelines can enhance management of nutrition information.
- c) Quality of advocacy engagements improves nutrition information management systems as these strengthen ownership and documentation of local evidence.
- d) Another best practice from Sri Lanka is visualizing progress through coding systems and understanding the link between cause and impact.

## 3.0 CONCLUSION AND RECOMMENDATIONS

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This section details the emerging conclusions and recommendations from the capacity assessment of the engaged stakeholders along the four dimensions. Section 3.1 presents the conclusions on governance systems, Section 3.2 details deductions on resources in terms of; human, technology and financial, Section 3.3 presents conclusions in the areas of coordination and partnership, section 3.4 presents emerging conclusions in the area of evidence-based decision making and section 3.5 presents the key recommendations from the capacity assessment.

### 3.1 Conclusion on Governance Systems

In terms of governance systems in Uganda;

- a) The existence of political commitment and willingness at National and Institution level to facilitate development and implementation of effective nutrition information management systems.
- b) A national multi-sectorial coordination mechanism exists under the OPM with a participation of key players including; MoH, MAAIF, NPA, UBOS among others
- c) A national results framework for nutrition information management is not yet developed.
- d) The legal and regulatory environment to streamline is outdated.
- e) Annual work plans for key stakeholders are not harmonized.
- f) A national nutrition information management framework needs to be designed and operationalized.
- g) Majority of institutions do not have nutrition specific policies on information management.
- h) Best practices indicate that a well streamlined policy environment and committed leadership at all level is key for improved nutrition information management.

### 3.2 Conclusion on Resources (Human, Financial and Systems)

In terms of resources;

- a) In terms of human resources nearly all organization had human resource gaps in terms of numbers and skills as far as nutrition information management is concerned.
- b) Majority of institutions about 90% lacked dashboard and other tools for data visualization.

- c) NITA-U infrastructure capacity is be underutilized by stakeholders.
- d) With exception of the MoH, MAAIF and OPM which had budgets tagged to nutrition information management, nearly 90% of institutions do not have a specific budget for nutrition information management.
- e) Annual work plans for key stakeholders are not harmonized
- f) A national nutrition information management framework needs to be designed and operationalized.
- g) A number of national level nutrition information management system exists but lacks integration, which limits information availability to stakeholders.
- h) While MoH developed a training manual for nutrition information management in 2017, the status of its implementation was not clearly established during the assessment.
- i) In terms of budget allocation, nutrition information management activities have budgets within functional areas of institutions. At national level, MoH, OPM and MAAIF have clear allocations on nutrition interventions. Emerged from the assessment majority of institutions assessed (about 90%) did not have a clear or distinct budget for nutrition information management. In majority of these organizations the roles of nutrition information management are subsumed within ICT, Communication and other result areas.

**Table 5: Current State of the Nutrition information management systems in Uganda as of August, 2019**

Parameters assessed	Situation in Uganda
Existence of IT Systems for Central Data Repository	None
Access to raw data across IT Systems	Unsatisfactory
Frequency of Data updating on existing IT System	Unsatisfactory
Analysis of available nutrition-related data	Partial (limited analysis of existing data sets)
Data exchange capability between IT Systems	Mostly non- existent
Presentation of summary statistics on existing	Available for some IT Systems (DHIS2, STAT Compilers)
Existence of IT Systems	Available (sector- specific)
Infrastructure for efficient data reporting(computers/internet)	Likely existence (no- gaps Highlighted)
Availability of standard Reporting tools	Likely existence (no-gaps Highlighted)
Type of Data collection – (Hard copy-based /digital)	Mostly hard copy based

Parameters assessed	Situation in Uganda
Tools used for Nutrition-related Data consolidation	MS Excel      Statistical software: STATA      IT System: DHIS2, STAT Compiler
Data Analytics/ Reporting and Dashboard	DHIS2, STAT Compiler
Level of program coverage across the Country	Moderate (as data for some indicators are collected in selected Districts of certain sub regions only as assessed for some of the 17 SUN MEAL indicators mapped as part of this assessment)
Plan for a multi - sectorial nutrition related data repository in place	Yes, Uganda NIPN (UNIPN)
Existence of data sharing law/ policy	Not yet
A Compliant data exchange mechanism/guidance	Absent
National budget allocated for Nutrition related interventions	yes
Major sources of Nutrition- related Data	Survey (UDHS, National Panel survey) Routine data collection through HIS, sector Annual Performance Reports, comprehensive food security and Vulnerability Assessments, any surveys undertaken by non-governmental organizations in any location in Uganda
Presence of Governing body for inter-sectorial coordination of Nutrition in Uganda	Yes, OPM

### 3.3 Conclusion on Coordination and Partnerships

In terms of the state of coordination and partnerships;

- a) The national nutrition coordination strategy exists as setup by UNAP and operationalized under National Information Platforms for Nutrition (NIPN), which is coordinated by OPM with the data functions housed within UBOS. Sector level working groups such as Nutrition Technical Working Group (NTWG) do exist although overall engagements are not regular. Near 90% of the respondents indicated that the quality of engagements in these forums is lacking to meet the information management needs of the sub-sector.
- b) As alluded to earlier partnerships, collaborations and alliances in forms of the National Information Platforms for Nutrition (NIPN) exist. Also, CSO partnerships exist and bring together key relevant sectors and stakeholder (government, civil society, Academia, business/private, UN/donor). However, majority of stakeholders (85%) indicated that there is weak follow up and inadequate documentation of actions agreed upon during the forums.
- c) It was revealed that there is limited participation of other key stakeholders on the platform especially Academia and CSOs and NITA-U.

- d) Limited awareness about the forums and events among key stakeholders emerged one of the limiting factors.

### **3.4 Conclusion on Evidence-based Decision Making**

In terms of evidence-based decision making;

- a) Existing nutrition information management systems are not integrated, to enable availability of information for evidence-based decision making
- b) The NIPN defined 17 nutrition information indicators but majority systems among stakeholders like EMIS, LOGIS, etc. do not capture all or most of the key indicators.
- c) Using output-based budgeting tool by MoFPED, nutrition targets are reflected in sector/district strategies/plans and allocations done to some key players especially MoH and OPM.
- d) There were no clear incentives for stakeholders to contribute data to UBOS on nutrition especially data generated by Academia and CSOs.
- e) Majority of the state actors interviewed indicated that, indeed nutrition data is key in formulation of policies and Programmes especially by; MoH, health facility level, district local government, MAAIF, NPA and OPM. It was revealed that UBOS maintains a database on nutrition indicators which can be assessed by partners, however there was no clear mechanism of how, data from surveys, assessments and information management systems of other stakeholders is integrated into the UBOS database. There are no dashboards for partners and governmental institutions on this database with exception of a generic public access portal, which is limited to basic data which often times is outdated.
- f) The current reporting and dissemination approaches are not effective as they are mainly limited to sector working group members by invitation. Also a few reports are published on the website.
- g) There is no clear tracking of progress and results at national and district level. Most of the key stakeholders like Academia, NPA, NITA-U and CSOs indicated limited input in the way of discussing reports to enrich the results uptake.
- h) The assessment revealed that national technical guidelines exist to guide nutrition service delivery at district level. However, there is limited awareness about them and their dissemination from national to district and from district to sub-district level is currently inadequate.
- i) In terms of performance oversight of nutrition portfolios, the most comprehensive approach is embedded in the MoH supervision and monitoring by the DHO, through DHNIMS, Village Health Teams (VHT) among others.

- j) The MoH indicated to have about 30 nutritionists stationed at National Referral hospitals, who work with District Nutrition Coordination Committees to monitor, evaluate and report district level nutrition targets within the District Development Plans.

### **3.5 Key Recommendations**

- a) The Government of Uganda should enact Nutrition Act and update the existing Nutrition Policy and associate instrument with the main aim of harmonizing action among stakeholders and improving the generation, processing and use of nutrition information by various actors.
- b) There is need to conduct awareness among stakeholders of the existing policies, frameworks and guidelines on nutrition information management.
- c) There is need to strengthen the national nutrition information function at UBOS with frameworks and mechanism of accessing data from various stakeholders real time.
- d) There is need to develop a nutrition information management framework in line with the government e-governance architecture and open data initiative.
- e) A national nutrition ontology needs to be defined.
- f) Majority of stakeholders need to enhance staff capacity in data science and analytics to improve the processing and integration of data in decision making
- g) Stakeholders need to take advantage of the NITA-U infrastructure capacity in management of nutrition data.
- h) There is need to strengthen community-based initiatives such as VHT as a means of establishing a community-based nutrition data surveillance system and platforms for community-based information dissemination.
- i) There is need to enhance the role of NPA in NIPN as a means of enhancing uptake and integration of nutrition information in national policy and programmes. For example, the policy advocacy function could be managed by NPA.
- j) The roles of Academia and Private Sector need to be enhanced with a clear level of responsibility. For example, the annual research agenda could be a responsibility of Academia within NIPN.

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## ANNEXES

- Data Collection Tools
- List of Key Informants consulted
- Synthesized Data Matrices



## 5.0 ANNEXES

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### 5.1 Data Collection Tools

#### Qualitative Tools

##### a) NIMS Capacity Assessment Tool for Public Sector and Development Agencies

The Government of Uganda, through Office of the Prime Minister, is implementing National Information Platform for Nutrition (NIPN), funded by the European Union (EU). The Initiative aNIMS to create a platform to bring together nutrition stakeholders at various levels to analyze existing information and data from all sectors to support the development of evidence-based policies and programmes to improve human nutrition. The purpose of this tool is to establish the current status of national nutrition information management systems and determine functional capacity and structures in place for improving nutrition requirements for NIPN. The tool is targeting national level key sectors and agencies that are known to contribute to malnutrition and to promote good nutrition, both nutrition-specific and nutrition-sensitive. These include Ministry of Health (MoH); Ministry of Agriculture, Animal Industry and Fisheries (MAAIF); Ministry of Gender, Labour and Social Development (MoGLSD); Ministry of Local Government (MoLG); Ministry of Trade, Industry and Cooperatives (MoTIC); Ministry of Energy and Mineral Development; Ministry of Education and Sports; Office of the Prime Minister, National Planning Authority (NPA) and Uganda Bureau of Statistics (UBOS), European Union (EU), United Nations International Children's Emergency Fund (UNICEF) and World Food Programme (WFP).

*Disclaimer: In line with the data privacy Act 2018, the information provided shall be strictly used for purposes of the study and any personal identifiable information shall be held with utmost confidentiality and shall only be used for verification of facts by the researchers*

#### Part one: Respondent Profile Information

1. Name (optional) .....
2. Gender .....
3. Organization .....
4. Sector of the Organization [Development Partners, NGO/Civil Society, Private Sector, National Level in Government, District Level, Others (*specify*) .....
5. Position/Title .....
6. Role in the organization .....
7. Maximum Education Level held in Nutrition related fields [Certificate, Diploma, Degree, Masters, PhD] .....
8. Years of experience in Nutrition Sector .....
9. Contact details (*optional*) .....

## **Part Two: Governance systems (Policy, Programmes and Frameworks)**

10. State any policies and frameworks which guide the management of nutrition information by non-state actors
11. Does your organization have a data management policy? And explain key tenets
12. State any monetary and non-monetary incentives for non-state actors to invest in nutrition information management
13. State any process and procedures used for multi sector nutrition information management by non-state actors
14. Are their multi sector nutrition information platforms and how frequently are their monitored?
15. As an organization, do you have a plan of action and budget for nutrition information management?
16. As an organization, do you have access to adequate technical support to develop, implement and monitor multi-sector nutrition information management plans?
17. What type of nutrition interventions, area of focus, or programmes are you involved in according to relevant policies?

## **Part Three: Resources (human and financial), Functions and infrastructure**

18. How many staff does your organization employ in the areas of nutrition information management?
19. What percentage of these are information management specialists or communication experts?
20. Do you have any data scientists on your team?
21. Describe briefly key elements of current nutrition information management system at your organization (databases, networks, dashboard, or manual systems) being used by non-state actors
22. At national level, how is nutrition information managed?
23. What are the existing challenges with the current information management systems?
24. What are the existing skill gaps in the nutrition information management systems operated by non-state actors?
25. Which platforms are these systems running on “open source technologies or propriety technologies”?
26. What kind of data should the nutrition information management system capture and what kind of reports should it generate?
27. What kind of service should a national information management system provide and to who?

## **Part Four: Coordination and partnerships**

28. Is there any form of coordination among actors in collection and analysis of nutrition information at various levels e.g. district and national level? Explain how
29. Is there a standard framework of nutrition data collection and integration in the sector?

## Part Five: Evidence based decision making

30. Is there a standard framework of nutrition data collection and integration in the sector and common ontology?
31. Are there any nutrition decision support systems in the sector such decision enhancement studios? Highlight any and indicate some of the users
32. What are the existing mechanisms of data collection, analysis and dissemination nutrition information?

## Thank you for participating in the research

### b) NIMS Capacity Assessment Tool for CSO and Academia

The government of Uganda with kind support from the European Union (EU) is implementing a National Information Platform for Nutrition (NIPN). It aNIMS at creating a platform to bring together and analyze existing information and data from all sectors to support the development of evidence-based policies and programmes to improve human nutrition. The purpose of this tool is to establish the current status of national nutrition information management systems and determine the requirements for NIPN. The tool is targeting, key informants from Civil Society Organizations (CSOs), Private Sector and Academia focusing on nutrition information management. **Disclaimer:** *In line with the data privacy Act 2018, the information provided shall be strictly used for purposes of the study and any personal identifiable information shall be held with utmost confidentiality and shall only be used for verification of facts by the researchers*

#### Part one: Respondent Profile Information.

33. Gender .....
34. Organization ..... And role at the organization .....
35. Type of organization [CSO, Academia, Private Sector]
36. Years of experience in nutrition sector .....

#### Part Two: Governance systems (Policy, Programmes and Frameworks)

37. Are you aware of any policies and frameworks which guide the management of nutrition information by non-state actors?
38. Does your organization have a data management policy?
39. Are you aware of any monetary and non-monetary incentives for none state actors to invest in nutrition information management? If yes explain
40. Are you aware of any multi sector nutrition information platforms? If so, how often do you participate?
41. As an organization, do you have a plan of action as well as budget for nutrition information management?
42. State any capacity gaps in terms of policy, programmes and frameworks for nutrition information management.

### Part Three: Resources (human and financial), Functions, and infrastructure

43. Does your organization have adequate human resource in the areas of nutrition information management?
44. Does your organization have a dedicated budget for nutrition information management? Explain
45. Does your organization have the right infrastructure to; collect, aggregate, process, and disseminate nutrition information? Explain how you manage nutrition information.
46. What are the existing capacity gaps in terms of human, financial and infrastructure resources?
47. What kind of service should a national information management system provide and to who?

### Part Four: Coordination and partnerships

48. Is there any form of coordination among actors in collection and analysis of nutrition information at various levels e.g. district and national level done? Explain how
49. Is there a standard framework of nutrition data collection and integration in the sector?
50. How best should coordination be done?

### Part Five: Evidence based decision making

51. Is there a standard framework of nutrition data collection and integration in the sector and common ontology?
52. Are there any nutrition decision support systems in the sector such decision enhancement studios? If any, highlight them and indicate some of the users
53. How best can nutrition information be integrated into decision making?

**Thank you for participating in the research**

## Quantitative Tools

### a) Please fill in below for all post of the organization that relate to Nutrition information management

Title of the post	Recommended positions	Established post	No. of posts filled	Recommended qualification of post holders	Qualification of post holders

### b) Capacity Assessment matrix for Nutrition Information Management

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance	Policies						
	Procedures						
	Data capture strategies						
	Data integration frameworks						
Human resources	Numbers						
	Competencies						
Technology platform	Systems and applications						
	Networks						

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Means of systems development and acquisition						
Data dissemination	Strategies Channels and practices Collaboration						
Financial resources	Overall budget for information management  % of budget for information system staff development  % of budget for technology growth						

## 5.2 List of Key Informants consulted

Name	Organization	Position	Contact Address
Mr. Vincent Senono Fred	Uganda Bureau of Statistics	Principal Statistician	0701312792
Mr. Musoke Andrew	Ministry of Local Government	Principal Economist	0779484799
Mr. David Mugisha	Ministry of Gender, Labour and Social Development	Commissioner Community Development and Literacy	0772981288
Ms Ketra Nakayenga	Ministry of Trade, Industry and Cooperatives	Senior Officer Quality Assurance and Standardisation	0774169998
Ms. Jacqueline Namyalo	National Planning Authority	Senior Planner ICT	<a href="mailto:jacqueline.namyalo@npa.go.ug">jacqueline.namyalo@npa.go.ug</a> 0772588811
Dr. Fredrick Kitoogo	National Information Technology Uganda (NITA-U)	Director Research, Planning and Development	0772855884
Mr. Moses Owiny	Women of Uganda Network (WOUGNET)	Manager, Information	+256414532035 owinymoses@gmail.com
Dr. Otto Francis	Regional Universities Forum for Capacity Building in Agriculture (RUFORUM)	Manager, K-Hub	041 7713300 a.egeru@ruforum.org
Ms. Nanda Musa	RUFORUM	Technical Specialist, Knowledge Management	041 7713300 a.egeru@ruforum.org

## 5.3 Synthesized Data Matrices

**Nutrition Information System Capacity Assessment Matrix – NPA**

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance <i>(External regulatory and Institutional environment)</i>	Laws	A number exists including the NPA act, Constitution of Uganda	A specific act on nutrition as currently most provisions as spread across sectors	Passing of a nutrition Act.		Government and Parliament of Uganda	
	Regulations and Policies	Uganda Vision 2040, Uganda Nutrition Action Plan 2011-2016, Uganda Food and Nutrition Policy 2003, and Number of guidelines and sector specific strategizes	Update of the policy environment so that it can be harmonized	Support in policy harmonized and Policy awareness among stakeholders	Harmonization of policies and programmes across sectors	OPM, NPA	Agriculture, health and education
	Procedures	At NPA we don't capture data directly from primary sources, but we depend of data reported by concerned government agencies	Automation of data capture procedure to facilitate integration data access from all stakeholders especially academic and CSO who don't have a legal obligation to submit data to NPA	Automation of procedures and streamlining indicators and data visualization platforms	Development of integration data capture and dissemination procedures and automation of the processes	OPM as the coordinator the Nutrition Action Plan	Procedures and automation
	Data capture strategies	Data is captured from entities like UBOS, NPC, MoH	Integrated data management systems and dashboards	improvement in use of ICT	Harmonize data capture strategizes  And Streamlining indicators		Automation

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Data integration frameworks	Not yet	It is desired, given the nature of data capture and usage	Both technology and capacity building at NPA and other stakeholders			Technologies are key
Human resources <i>(Numbers, skills and competencies)</i>	Numbers of staff deployed for Nutrition information related activities	3 (include 2 IT staff and one staff from social development)	2	At least 2 more dedicated staff to handle nutrition information but also skilling the existing staff in data science	More dedicated staff and skills in data science	The NPA Board	At least one data scientist focused on Nutrition information management
	Skills of staff in nutrition function	Currently this is a weak area	N/A	Trainings			
	Staff competencies	ICT systems management, policy and strategy planning, data analysis in general		More training in nutrition related skills and more important data science and data mining			Staff training in data science and data mining
	Capacity building systems <i>(e.g. staff training programmes and support structures)</i>	We sponsor staff to professional specific programmes. But we don't have a nutrition specific					
Technology platforms	Business systems and applications <i>(Decision support systems, Information)</i>	Yes, NPA has access to a number of decision support systems and MIS like IFMS, IPPS, EMIS, UBSO data portal, National GIS Portal, tect			Development of API's and data visualization dash board to enable integration of various systems hosting nutrition	NPA Board and Management	API's and data visualization systems

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	<i>Management systems, etc)</i>				information, but also enable data visualization in real-time		
	platforms and systems architecture (e.g. cloud based or locally hosted)	Given the e-government policy most systems are housed at NITA-U data Centre (cloud base architecture). Some systems are local hosted					
	Nature of technologies (open source or proprietary)	Government promotes use of open source technologies		trainings			
	Databases used (Manual, oracle, MySQL, etc.)	Both manual (reports) and automate database					
	Means of systems development and acquisition (Off-salve, internal or external)	Internal systems development and off-shelve					
Data dissemination	Framework of nutrition data collection and integration in the sector	Through sector working groups and nutrition information action platform.			Must improve coordination with CSO and Academia		OPM, NPA and other actors in the sub-sector
	Channels of information dissemination	Reports, workshops, NPA website			Use of social media, mass media and online data		NPA Board and ICT department



Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	<i>(Radios, TV, Websites, etc)</i>				access platforms to enhance accessibility if this information		
	Collaboration practices	Currently NPA has a broad collaboration framework with various actors			Streaming the collaboration on nutrition information management to ensure effective access of data, data dissemination and use of data in policy formulation		NPA Board and MoFPED
Financial resources	Overall institutional budget for information management	Budget is integrated in functional units of NPA e.g. ICT and Social development department s	More funding is desired to facilitate technology platforms development and processes of data capture and processing	Training			NPA Board and MoFPED
	% of budget for information system staff development	Not known					
	% of budget for technology growth	Not known					

## Nutrition Information System Capacity Assessment Matrix – MoLG

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance <i>(External regulatory and Institutional environment)</i>	Laws	Constitution of Uganda, Local Government Act					
	Regulations and Policies	The Uganda Nutrition Action Plan 2011-2016	Capacity building of staff			government	
	Procedures	Nutrition related data is captured at health facilities through DHIS, this is accessed by the MoLG	Streamlining of indicator for nutrition information				
	Data capture strategies	Similar as above	Streamlining indicators and automation of data capture and visualization	Automation of data capture strategizes		MoLG top management	
	Data integration frameworks	We don't have any at the moment			Develop and deploy technologies to integration nutrition information from various sources		
Human resources <i>(Numbers, skills and competencies)</i>	Numbers of staff deployed for Nutrition information related activities	3 officers and MoLG but these in theory collaborate with IT officers stationed at various local governments	3 officers for nutrition activities at MoLG are enough				
	Skills of staff in nutrition function	ICT, communication and policy	Preferably Food and Nutrition trainings	Have trainers of trainers in nutrition information management and data analysis			
	Staff competencies	They do not have competence in nutrition	Train staff in nutrition information and knowledge management	People should be trained on nutrition		Senior management of MoLG and the OPM which is in charge of	Staff training in data management

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
						coordination the Uganda Nutrition Action Plan 2011-2016	
	Capacity building systems (e.g. staff training programmes and support structures)	Our staff attend the mandatory trainings provided by Ministry of public service but also professional specific trainings	. Also, capacity is needed in data mining since there is a lot of information from Academia and media on nutrition				
Technology platforms	Platforms and systems architecture (e.g. cloud based or locally hosted)	Current systems are client service and cloud based. Mainly hosted by NITA-U, e.g. DHNIMS, IFMIS, IPPS, etc.	Develop systems specific to nutrition information management	Develop systems specific to nutrition information management		MoLG	Systems development
	Nature of technologies (open source or proprietary)	A mix of both “open (Geo-enabling and IFMS) source” and “proprietary” system such as windows platforms		Open source technologies			
	Databases used (Manual, oracle, MySQL, etc.)	I don't know		Develop a specific database for nutrition information management			
	Means of systems development and acquisition (Off-salve, internal or external)	<ul style="list-style-type: none"> <li>- Sector led systems</li> <li>- Support from Implementing partners</li> <li>- Largely using open source technologies</li> </ul>		N/A	N/A		
Data dissemination	Channels of information dissemination	Information is usually sent through the websites, workshops	Improve access to nutrition information	Improve access to nutrition information			

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	<i>(Radios, TV, Websites, etc.)</i>	and sector working groups		through websites and mass media			
	Collaboration practices	- Partner-led learning and collaborative events both at National and District levels					
Financial resources	Overall institutional budget for information management	- M&E components are integrated in the annual work plans and budgets	Provide funding vote for nutrition related activities including data management				
	% of budget for information system staff development	- Integrated in the general staffing plans and budgets					
	% of budget for technology growth	- Integrated in general ICT budgets and work plans					

## Nutrition Information System Capacity Assessment Matrix – MAAIF

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance	Laws	-	-	-	-	-	-
<i>(External regulatory and Institutional environment)</i>	Regulations and Policies	<ul style="list-style-type: none"> <li>- National Agricultural Policy</li> <li>- National Extension Policy</li> <li>- Communication policies (e.g. Communication development strategy, Agriculture information Strategy, Agriculture sector Knowledge Management and Communication strategy)</li> <li>- The UNAP</li> </ul>	- Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms) so sector can align and report accordingly	- Food and Nutrition Security M&E and reporting capacities		- OPM UNAP Secretariat	
	Procedures						
	Data capture strategies	<ul style="list-style-type: none"> <li>- Depends on policy frameworks under ICT</li> <li>- Data collection instruments as provided by the technical working groups for Food and Nutrition security and the one for Food balance</li> <li>- Multi-Sectoral Project data collection in 1000 schools</li> </ul>	- Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms) so sector can align and report accordingly	- Food and Nutrition Security M&E and reporting capacities		<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- Top/Senior Management</li> </ul>	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Data integration frameworks	<ul style="list-style-type: none"> <li>- e-based platform for nutrition information management (KOBO)</li> <li>- FUSINET</li> <li>- Geo-enabling (GPS) information system currently in 15 districts</li> <li>- Dietary Diversity scores for Nutrition assessments</li> <li>- Food and Nutrition Security Vulnerability assessment</li> </ul>			<ul style="list-style-type: none"> <li>- Support training of M&amp;E personal (in sectors) on the usage of data management packages</li> </ul>	<ul style="list-style-type: none"> <li>- OPM UNAP secretariat</li> <li>- Implementing partners</li> </ul>	
Human resources ( <i>Numbers, skills and competencies</i> )	Numbers of staff deployed for Nutrition information related activities	<ul style="list-style-type: none"> <li>- Senior Agricultural Officer for food and nutrition security</li> <li>- M&amp;E staff in the different divisions that are called upon to provide food and nutrition security related information</li> <li>- ICT unit staff in the different divisions</li> </ul>	<ul style="list-style-type: none"> <li>- Officers to have food and nutrition security knowledge to support collection of information</li> </ul>				
	Skills of staff in nutrition function	<ul style="list-style-type: none"> <li>- Statistics</li> <li>- M&amp;E, Data Management</li> <li>- Information management</li> <li>- Knowledge management and communication</li> </ul>	<ul style="list-style-type: none"> <li>- Training on Food and Nutrition security information management aspects critical for data capturing</li> </ul>	<ul style="list-style-type: none"> <li>- Training and refresher manuals/module for staff on key food and nutrition security components during data capture, surveillances etc</li> </ul>			

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
		- Surveillance					
	Staff competencies	- Conducting Assessments and surveys - Innovations - Data Management - Reporting - Communication	- Some staff lack basic nutrition knowledge especially on key nutrition parameters	- Training (Manuals)/ refresher courses on nutrition data management (focus on the key data parameters)	- Ensure to include these in national training Programmes	- OPM UNAP Secretariat - MAAIF Senior Management - Implementing partners	
	Capacity building systems (e.g. staff training programmes and support structures)	- Trainings before assessments, surveillances etc. - Partner driven trainings	- Trainings should integrate in-depth learning on key food and nutrition parameters		- Ensure to include these in national training Programmes	- OPM UNAP secretariat - MAAIF Senior Management - Implementing partners	
Technology platforms	Business systems and applications (Decision support systems, Information Management systems, etc)	e-based platform for nutrition information management (KOBO) - FUSINET - Geo-enabling (GPS) information system currently in 15 districts	- Linked to a multi-sectoral reporting system - Should capture food safety issues	- Embedding in the UNAP M&E framework		- OPM UNAP Secretariat - MAAIF Senior Management - Implementing partners (FAO, WFP, GASFP etc)	
	Platforms and systems architecture (e.g. cloud based or locally hosted)						
	Nature of technologies (open source or proprietary)	A mix of both “open (Geo-enabling and IFMS) source” and “proprietary”					

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Databases used (Manual, oracle, MySQL, etc.)						
	Means of systems development and acquisition (Off-salve, internal or external)	<ul style="list-style-type: none"> <li>- Sector led systems</li> <li>- Support from Implementing partners</li> </ul>					
Data dissemination	Framework of nutrition data collection and integration in the sector	<ul style="list-style-type: none"> <li>- Food and Nutrition Security committee</li> <li>- Technical working groups (quarterly reporting meetings)</li> <li>- Similar committees at the district and sub-counties that report to the national committees</li> <li>- District Agricultural extension workers</li> </ul>	<ul style="list-style-type: none"> <li>- This information should be integrated into the Multi-sectoral reporting platforms (through the multi-sectoral working group)</li> <li>- Utilization of the DNCCs in the districts for reporting and follow up on district plans</li> </ul>			<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- MAAIF Senior Management</li> <li>- Implementing partners</li> </ul>	
	Channels of information dissemination (Radios, TV, Websites, etc)	<ul style="list-style-type: none"> <li>- Dissemination of survey findings at different platforms</li> <li>- Bulletins</li> <li>- Website</li> <li>- Media (print and TV)</li> </ul>		-Tracking reach of messages and measure of impact	Strengthening existing media dissemination monitoring	<ul style="list-style-type: none"> <li>- Food and Nutrition security Committee</li> <li>- Development and Implementing partners</li> </ul>	
	Collaboration practices	<ul style="list-style-type: none"> <li>- Partner-led learning and collaborative</li> </ul>				<ul style="list-style-type: none"> <li>- Food and Nutrition security Committee</li> </ul>	



Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
		events both at National and District levels				- Development and Implementing partners	
Financial resources	Overall institutional budget for information management	- M&E components are integrated in the annual work plans and budgets					
	% of budget for information system staff development	- Integrated in the general staffing plans and budgets		-			
	% of budget for technology growth	- Integrated in general ICT budgets and workplans					

### Nutrition Information System Capacity Assessment Matrix – MOGLSD

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance	Laws	-	-	-	-	-	-
<i>(External regulatory and Institutional environment)</i>	Regulations and Policies	<ul style="list-style-type: none"> <li>- Uganda Nutrition Action Policy (<i>in review</i>)</li> <li>- Uganda Nutrition Policy (<i>draft</i>)</li> <li>- National Development Plan</li> <li>- Sector Development Plan</li> <li>- Social Protection Policy.</li> <li>- Integrated Early Childhood Policy</li> <li>- National Community Development Policy (<i>where the social development sectors fall</i>)</li> </ul>	- Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms) so sector can align and report accordingly	- Community mobilization for Food and Nutrition Security M&E and reporting capacities		- OPM UNAP Secretariat	
	Procedures						
	Data capture strategies	MOGLSD is currently being assisted with a <b>single registry</b> tailored to different component management systems like	- Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms) so sector can align and report accordingly	- Food and Nutrition Security M&E and reporting capacities		- OPM UNAP Secretariat - Sector Top/Senior Management	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
		<ul style="list-style-type: none"> <li>- OVC management System</li> <li>- Functional Adult Literacy Management systems</li> <li>- Social Assistance Grant for Empowerment Gender Violence Management system.</li> </ul>					
	Data integration frameworks	<ul style="list-style-type: none"> <li>- Computerized M&amp;E tools for the single registry CDMIS; with modules</li> </ul>	<ul style="list-style-type: none"> <li>- Operationalization and usage by the intended users (CDOs)</li> </ul>	<ul style="list-style-type: none"> <li>- Training/ Refresher for usage of the Single Registry to pick nutrition components</li> </ul>		<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- Sector Top/Senior Management</li> <li>- Implementing partners</li> </ul>	
Human resources (Numbers, skills and competencies)	Numbers of staff deployed for Nutrition information related activities	<p>Department has 11 officers that directly work with:</p> <ul style="list-style-type: none"> <li>• 134 DCDOs.</li> <li>• 41 Municipal Officers</li> </ul> <p>These report on nutrition-related issues</p>	<ul style="list-style-type: none"> <li>- Officers to have food and nutrition security knowledge to support collection of information</li> </ul>			<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- Sector Top/Senior Management</li> <li>- Implementing partners</li> </ul>	
	Skills of staff in nutrition function	<ul style="list-style-type: none"> <li>- Statistics</li> <li>- M&amp;E, Data Management</li> <li>- Information management</li> <li>- CDOs have received nutrition training</li> </ul>	<ul style="list-style-type: none"> <li>- Training on Food and Nutrition information management aspects critical for data capturing</li> <li>- Turn-over hence new recruits and the need for their training</li> </ul>	<ul style="list-style-type: none"> <li>- Training and refresher manuals/module for staff on key food and nutrition security components</li> </ul>		<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- Sector Top/Senior Management</li> <li>- Implementing partners</li> </ul>	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Staff competencies	<ul style="list-style-type: none"> <li>- Conducting Assessments and surveys</li> <li>- Data Management</li> <li>- Reporting</li> <li>- Community mobilization</li> </ul>	<ul style="list-style-type: none"> <li>- Some staff lack basic nutrition knowledge especially on key nutrition parameters</li> </ul>	<ul style="list-style-type: none"> <li>- Training (Manuals)/ refresher courses on nutrition data management (focus on the key data parameters)</li> </ul>	<ul style="list-style-type: none"> <li>- Ensure to include these in national training Programmes</li> </ul>	<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- MAAIF Senior Management</li> <li>- Implementing partners</li> </ul>	
	Capacity building systems (e.g. staff training programmes and support structures)	<ul style="list-style-type: none"> <li>- On job-training tailored to capability/the need to handle nutrition issues</li> </ul>					
Technology platforms	Business systems and applications (Decision support systems, Information Management systems, etc)	<ul style="list-style-type: none"> <li>- Single Registry CDMIS</li> </ul>	<ul style="list-style-type: none"> <li>- Operationalization and usage by the intended users (CDOs)</li> </ul>	<ul style="list-style-type: none"> <li>- Training/ Refresher for usage of the Single Registry to pick nutrition components</li> </ul>		<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- Sector Top/Senior Management</li> <li>- Implementing partners</li> </ul>	
	Platforms and systems architecture (e.g. cloud based or locally hosted)						
	Nature of technologies (open source or proprietary)	<ul style="list-style-type: none"> <li>- Dashboard</li> </ul>					

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Databases used (Manual, oracle, MySQL, etc.)						
	Means of systems development and acquisition (Off-salve, internal or external)	- Support from Implementing partners					
Data dissemination	Framework of nutrition data collection and integration in the sector	<ul style="list-style-type: none"> <li>- Planning at Macro-level (Ministry's Sector nutrition committee)</li> <li>- Cascades down to districts, sub-counties, parishes, villages (community dialogues) and then households (home visits)</li> <li>- Information obtained from the DNCCs and SNCCs</li> <li>- Existence of monitoring and supervision tools</li> <li>- Inter-ministerial multi-sectoral nutrition coordination committee converged by OPM.</li> </ul>	<ul style="list-style-type: none"> <li>- This information should be integrated into functionalized Multi-sectoral reporting platforms (through the multi-sectoral working group)</li> <li>- Further utilization of the DNCCs in the districts for reporting and follow up on district plans</li> </ul>			<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- MAAIF Senior Management</li> <li>- Implementing partners</li> </ul>	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Channels of information dissemination <i>(Radios, TV, Websites, etc)</i>	<ul style="list-style-type: none"> <li>- Sector nutrition committee monthly, quarterly meetings</li> <li>- Dissemination of survey findings at different platforms</li> <li>- Website</li> <li>- Media (print and TV)</li> </ul>		-Tracking reach of messages and measure of impact	<ul style="list-style-type: none"> <li>- Strengthening existing media dissemination monitoring</li> </ul>	<ul style="list-style-type: none"> <li>- Food and Nutrition security Committee</li> <li>- Development and Implementing partners</li> </ul>	
	Collaboration practices	<ul style="list-style-type: none"> <li>- CSO platforms for information sharing</li> <li>- Partner-led learning and information sharing platforms</li> </ul>					
Financial resources	Overall institutional budget for information management	<ul style="list-style-type: none"> <li>- Sector development plans include components of the UNAP</li> </ul>	<ul style="list-style-type: none"> <li>- Plans should cater specifically to nutrition specific, sensitive and governance interventions and these included in the M&amp;E framework</li> </ul>			<ul style="list-style-type: none"> <li>- Senior Management</li> <li>- Sector Nutrition technical committee/ working group</li> <li>- Implementation partners</li> </ul>	
	% of budget for information system staff development	<ul style="list-style-type: none"> <li>- Integrated in the general staffing plans and budgets</li> </ul>					
	% of budget for technology growth						

## Nutrition Information System Capacity Assessment Matrix – MoH

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance  <i>(External regulatory and Institutional environment)</i>	Laws	-	-	-	-	-	-
	Regulations and Policies	- Uganda Nutrition Policy - Uganda Nutrition Action Plan 2 (in development)	- Approval of the policies - Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms)	- M&E and reporting capacities		- Senior Management - Nutrition Technical Working Group (NTWG)	
	Procedures	- MIYCAN - IMAM guidelines - Health Sector Strategic Plan (Nutrition is a section) - Comprehensive Nutrition Strategic Plan	- Clear M&E frameworks and flow of information (Bottom to top and top to bottom)	- M&E and reporting capacities		- Senior Management - Nutrition Technical Working Group (NTWG)	
	Data capture strategies	- Health Management Information Systems - District Health Information Management Systems  i) There are guidelines and training packages for HMIS data collectors - M&E Technical Working group that quarterly reports to					

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
		the NTWG and/or Senior Management for decision making					
	Data integration frameworks	<ul style="list-style-type: none"> <li>-Micro-nutrient Technical working group</li> <li>- Annual work plans (AWPs) have a component on M&amp;E</li> <li>- Working group on Food Fortification regulation and compliance to standards</li> <li>- Participation in the Integrated Food Security Classification (IPC) Phased assessment coordinated by MAAIF</li> </ul>	<ul style="list-style-type: none"> <li>-Ability to integrate information into the Multi-sectoral reporting platform (OPM)</li> <li>- Ability to access community information from the community. There is a gap as information is usually accessed up to the health facility</li> </ul>	<ul style="list-style-type: none"> <li>- M&amp;E and reporting capacities within the Sector and across the multi-sectoral platform</li> <li>- Utilization of existing VHT structures to collect information</li> </ul>	Institutionalization or revamping of the Food and Nutrition Multi-sectoral working group (includes sectors and non-state actors)	<ul style="list-style-type: none"> <li>- OPM Nutrition Secretariat</li> <li>- Senior Management</li> <li>- Nutrition Technical Working Group (NTWG)</li> <li>- Development and Implementing partners</li> </ul>	
Human resources ( <i>Numbers, skills and competencies</i> )	Numbers of staff deployed for Nutrition information related activities	<ul style="list-style-type: none"> <li>- 3 to 4 M&amp;E Officers (statisticians)</li> <li>- About 30 Nutritionists situated at the National Referral Hospitals and sit on the respective District Nutrition Coordination Committees</li> </ul>	-Officers with a background in Nutrition because of the complexity of dataset parameters to be collected (both at National and District level)	<ul style="list-style-type: none"> <li>- Training (Manuals)/refresher courses on nutrition data management (focus on the key data parameters)</li> </ul>	<ul style="list-style-type: none"> <li>- Training/R refresher manuals</li> </ul>	<ul style="list-style-type: none"> <li>- Senior Management</li> <li>- Nutrition Technical Working Group (NTWG)</li> <li>- Development and Implementing partners</li> </ul>	
	Skills of staff in nutrition function	<ul style="list-style-type: none"> <li>- Statistics</li> <li>- M&amp;E, Data Management</li> </ul>	- Staff to have basic knowledge on nutrition	<ul style="list-style-type: none"> <li>- Training (Manuals)/refresher</li> </ul>		<ul style="list-style-type: none"> <li>- Senior Management</li> </ul>	



Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
		<ul style="list-style-type: none"> <li>- Reporting</li> <li>- Communication</li> </ul>	<ul style="list-style-type: none"> <li>- Basic knowledge/Refresher on data collection and interpretation (vis-à-vis nutrition parameters)</li> </ul>	<ul style="list-style-type: none"> <li>courses on nutrition data management (focus on the key data parameters)</li> </ul>		<ul style="list-style-type: none"> <li>- Nutrition Technical Working Group (NTWG)</li> <li>- Development and Implementing partners</li> </ul>	
	Staff competencies	<ul style="list-style-type: none"> <li>- Conducting Assessments and surveys</li> <li>- Data Management</li> <li>- Reporting</li> <li>- Communication</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of basic nutrition knowledge especially on key nutrition parameters</li> </ul>	<ul style="list-style-type: none"> <li>- Training (Manuals)/ refresher courses on nutrition data management (focus on the key data parameters)</li> </ul>		<ul style="list-style-type: none"> <li>- Senior Management</li> <li>- Nutrition Technical Working Group (NTWG)</li> <li>- Development and Implementing partners</li> </ul>	
	Capacity building systems (e.g. staff training programmes and support structures)	<ul style="list-style-type: none"> <li>- National Trainers of Trainers exist (that are certified to conduct several trainings)</li> <li>- Partner driven trainings</li> <li>- Refresher courses for Health workers, Nutritionists and VHTs</li> <li>- Programme driven trainings</li> </ul>	<ul style="list-style-type: none"> <li>- All trainings and refresher courses should be driven by one focal center to avoid duplications and allow for good utilization of resources (preferably the Multi-sectoral secretariat that feeds into the different sector trainings / refresher courses)</li> </ul>	<ul style="list-style-type: none"> <li>- Maintenance and regular updating of the Trainers of Trainers list</li> </ul>	<ul style="list-style-type: none"> <li>- Ensure the pool of ToTs covers Multi-sectoral interventions</li> <li>- Establish a training/Refresher courses calendar that is circulated across multi-sectoral platforms</li> </ul>	<ul style="list-style-type: none"> <li>- OPM Nutrition Secretariat</li> </ul>	
Technology platforms	Business systems and applications (Decision support systems, Information)	<ul style="list-style-type: none"> <li>- HMIS</li> <li>- DHIS2</li> <li>- Partner driven platforms</li> <li>- UBOS platforms</li> </ul>					

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	<i>Management systems, etc)</i>						
	platforms and systems architecture (e.g. cloud based or locally hosted)						
	Nature of technologies (open source or proprietary)	- Both "open source" and proprietary					
	Databases used (Manual, oracle, MySQL, etc.)						
	Means of systems development and acquisition (Off-salve, internal or external)	Internal Ministry systems housed at the Ministry of health resource center					
Data dissemination	Framework of nutrition data collection and integration in the sector	- Through the HMIS and DHIS2, data collection is coordinated from the district to the national level (Health facilities collect data and make reports, submit to the districts that	- This information should be integrated into the Multi-sectoral reporting platforms	- Training (Manuals)/ refresher courses on nutrition data management (focus on the key data parameters)	- Institutionalization or revamping of the Food and Nutrition Multi-sectoral working group	Senior Management - Nutrition Technical Working Group (NTWG) - Development and Implementing partners	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
		<i>submit to the National level)</i> - Special surveys e.g. annual panel surveys, food and nutrition surveys in Karamoja, etc.			(includes sectors and non-state actors)		
	Channels of information dissemination ( <i>Radios, TV, Websites, etc.</i> )	- Nutrition Bulletins - Dissemination through national and international days e.g. <i>World Breast Feeding week, World Food day, International Women's day etc</i> - Media: print and TV - Ministry of Health website		-Tracking reach of messages and measure of impact	- Strengthening existing media dissemination monitoring	- Nutrition Technical Working Group (NTWG) - Development and Implementing partners	
	Collaboration practices	- Partner-led learning and collaborative events both at National and District levels				- Nutrition Technical Working Group (NTWG) - Development and Implementing partners	
Financial resources	Overall institutional budget for information management	M&E components are integrated in the annual work plans					
	% of budget for information system staff development	- Integrated in the general staffing plans and budgets	- Budget for training and refresher courses to the existing staff	- Budget reviews to include new staffing role	- Advocating and lobbying for budgets for staffing	- Nutrition Technical Working Group (NTWG)	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
			- Budget for specialized staffing e.g. Data Scientists			- Development and Implementing partners - Ministry of Public Service	
	% of budget for technology growth						

### Nutrition Information System Capacity Assessment Matrix – WFP

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance	Laws	-	-	-	-	-	-
<i>(External regulatory and Institutional environment)</i>	Regulations and Policies	<ul style="list-style-type: none"> <li>- Uganda Nutrition Policy</li> <li>- Uganda Nutrition Action Plan 2 (in development)</li> <li>- Sustainable Development Goals (SDGs)</li> </ul>	<ul style="list-style-type: none"> <li>- Approval of the policies by the Government</li> <li>- Finalization of the UNAP with a clear M&amp;E framework (data to be captured, by who, when and dissemination mechanisms) so WFP can take on aspects</li> </ul>	<ul style="list-style-type: none"> <li>- M&amp;E and reporting capacities</li> </ul>		<ul style="list-style-type: none"> <li>- Senior Management</li> <li>- Nutrition Technical Working Group (NTWG)</li> </ul>	
	Procedures						
	Data capture strategies	<ul style="list-style-type: none"> <li>- Existing Organization M&amp;E frameworks embedded in work plans</li> </ul>					
	Data integration frameworks	<ul style="list-style-type: none"> <li>- Support Implementation through Integrated Management of Malnutrition using scope CODA (used to improve quality of IMAM data).</li> <li>- Karamoja Social registry</li> </ul>	<ul style="list-style-type: none"> <li>-Eventual uptake by the Government</li> </ul>	<ul style="list-style-type: none"> <li>- Technical assistance to the Government on the usage</li> </ul>	<ul style="list-style-type: none"> <li>- Support training of M&amp;E personal (in sectors) on the usage of data management packages (e.g. Scope Coder for improvement on data management)</li> </ul>	<ul style="list-style-type: none"> <li>- OPM Nutrition secretariat</li> <li>- Partners (e.g. WFP)</li> </ul>	
Human resources	Numbers of staff deployed for Nutrition	<ul style="list-style-type: none"> <li>- Scope Coder personnel (5; 1 in the field and at national level)</li> </ul>					

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
<i>(Numbers, skills and competencies)</i>	information related activities	<ul style="list-style-type: none"> <li>- M&amp;E Unit of which Nutrition is a component</li> <li>- Karamoja Social Registry team of which nutrition is a component</li> </ul>					
	Skills of staff in nutrition function	<ul style="list-style-type: none"> <li>- Statistics</li> <li>- M&amp;E, Data Management</li> <li>- Data Analyst</li> <li>- Innovations</li> <li>- Reporting</li> <li>- Communication</li> </ul>	- Leverage on these capacities to support the Government of Uganda systems				
	Staff competencies	<ul style="list-style-type: none"> <li>- Conducting Assessments and surveys</li> <li>- Innovations</li> <li>- Data Management</li> <li>- Reporting</li> <li>- Communication</li> </ul>	- Some staff lack basic nutrition knowledge especially on key nutrition parameters	- Training (Manuals)/ refresher courses on nutrition data management (focus on the key data parameters)	- Ensure to include these in national training Programmes	- Partner (e.g. WFP), OPM Nutrition Secretariat	
	Capacity building systems ( <i>e.g. staff training programmes and support structures</i> )	<ul style="list-style-type: none"> <li>- Programme driven trainings</li> </ul>			- Ensure to include these in national training Programmes	- Partner and OPM Nutrition secretariat	
Technology platforms	Business systems and applications ( <i>Decision support systems, Information</i> )	<ul style="list-style-type: none"> <li>- Scope Coder</li> <li>- Karamoja Social Registry</li> <li>- Program Management Info system (PROMISE)</li> </ul>	- Involvement of the Nutrition Multi-stakeholders in the process			- Partner and OPM Nutrition Secretariat	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	<i>Management systems, etc)</i>	- COMET (HMIS review after 5 years)					
	platforms and systems architecture ( <i>e.g. cloud based or locally hosted</i> )						
	Nature of technologies ( <i>open source or proprietary</i> )	- Systems are a mix of both "open source" and "propriety" technologies					
	Databases used ( <i>Manual, oracle, MySQL, etc.</i> )						
	Means of systems development and acquisition ( <i>Off-salve, internal or external</i> )						
Data dissemination	Framework of nutrition data collection and integration in the sector	- Evaluation researches to inform government on performance e.g. "cost of a nutritious diet" - FSNA (in Karamoja) with government being involved in reviewing tools, data collection and presentation of	- This information should be integrated into the Multi-sectoral reporting platforms (through the multi-sectoral working group)				

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
		<ul style="list-style-type: none"> <li>- results to the NTWG.</li> <li>- Tech. support to data management of the HMS</li> <li>- Tech. support to policy formulation</li> </ul>					
	Channels of information dissemination ( <i>Radios, TV, Websites, etc</i> )	<ul style="list-style-type: none"> <li>- Nutrition Bulletins Dissemination through national and international days e.g. <i>World Breast Feeding week, World Food day,</i></li> <li>- Media: print and TV</li> <li>- Ministry of Health website</li> </ul>		-Tracking reach of messages and measure of impact	- Strengthening existing media dissemination monitoring	<ul style="list-style-type: none"> <li>- Nutrition Technical Working Group (NTWG)</li> <li>- Development and Implementing partners</li> </ul>	
	Collaboration practices	<ul style="list-style-type: none"> <li>- Partner-led learning and collaborative events both at National and District levels</li> </ul>				<ul style="list-style-type: none"> <li>- Nutrition Technical Working Group (NTWG)</li> <li>- Development and Implementing partners</li> </ul>	
Financial resources	Overall institutional budget for information management	<ul style="list-style-type: none"> <li>- M&amp;E components are integrated in the annual work plans and budgets</li> <li>- Budget to provide Technical assistance to the</li> </ul>					



Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
		government Programmes					
	% of budget for information system staff development	- Integrated in the general staffing plans and budgets					
	% of budget for technology growth						

#### Nutrition Information System Capacity Assessment Matrix – OPM

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance	Laws	-	-	-	-	-	-
<i>(External regulatory and Institutional environment)</i>	Regulations and Policies	<ul style="list-style-type: none"> <li>- Uganda Nutrition Action Plan <i>(in review)</i></li> <li>- Uganda Nutrition Policy <i>(draft)</i></li> <li>- National Development Plan</li> <li>- Sector Development Plan</li> </ul>	- Finalization of the UNAP with a clear M&E framework (data to be captured, by who, when and dissemination mechanisms) so sectors can align and report accordingly	- Training on nutrition parameters for ease of tracking and reporting		- OPM UNAP Secretariat	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Procedures						
	Data capture strategies	<ul style="list-style-type: none"> <li>- M&amp;E systems in the sector</li> <li>- Coordination of multi-sectors for nutrition implementation</li> </ul>	<ul style="list-style-type: none"> <li>- Finalization of the UNAP with a clear M&amp;E framework (data to be captured, by who, when and dissemination mechanisms) so sector can align and report accordingly</li> <li>- M&amp;E systems that fully capture food and nutrition information</li> <li>- Identification of critical actors so that they are given follow up responsibilities</li> <li>- Data capture tools under development to be completed</li> </ul>	<ul style="list-style-type: none"> <li>- Food and Nutrition Security M&amp;E and reporting capacities</li> </ul>		<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- Sector Top/Senior Management</li> </ul>	
	Data integration frameworks	<ul style="list-style-type: none"> <li>- DINU</li> <li>- PRDP 2</li> <li>- Northern Uganda Rehabilitation</li> <li>- Capitalizing and linking with other agencies e.g. UBOS</li> <li>- Technical working groups</li> <li>- Secretariat of sector working groups</li> <li>- District Nutrition Coordination Committees – DNCCs (At district level)</li> </ul>	<ul style="list-style-type: none"> <li>- A well-established multi-sectoral working group to which these frameworks can be linked and report to</li> </ul>		<ul style="list-style-type: none"> <li>-</li> </ul>	<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- Sector Top/Senior Management</li> <li>- Implementing partners</li> </ul>	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
		- Heads of department meetings					
Human resources (Numbers, skills and competencies)	Numbers of staff deployed for Nutrition information related activities	- NIPN focal person - UNAP coordination unit (however these perform other OPM duties)	- Officers to have food and nutrition security knowledge to support coordination and management of nutrition information - Recruitment of more manpower to support with nutrition coordination			- OPM UNAP Secretariat - Sector Top/Senior Management - Implementing partners	
	Skills of staff in nutrition function	- Statistics - Policy Analysis - Nutrition programming - M&E - Advocacy and networking	- Training on Food and Nutrition information management aspects critical for data capturing -	- Training and refresher manuals/module for staff on key food and nutrition security components		- OPM UNAP Secretariat - Sector Top/Senior Management - Implementing partners	
	Staff competencies	- Policy development - M&E - Resource mobilization / lobbying - Reporting - Coordination of stakeholders	- Some staff lack basic nutrition knowledge especially on key nutrition parameters	- Training (Manuals)/ refresher courses on nutrition data management (focus on the key data parameters)	- Ensure to include these in national training Programmes	- OPM UNAP Secretariat - Sector Senior Management - Implementing partners	
	Capacity building systems (e.g. staff training programmes and	- On job-training tailored to capability/the need to handle nutrition issues	- Enhanced coordination capacities	- Strengthening of coordination capacities		- OPM UNAP Secretariat - Technical Assistance from implementing partners	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	<i>support structures)</i>	- Technical assistance from implementing partners					
Technology platforms	Business systems and applications ( <i>Decision support systems, Information Management systems, etc</i> )	- Websites built by partners e.g. FANTA, UNICEF	- Technical support is establishing and operationalizing sustainable platforms	- Capacity building on use of online platforms to capture information (Nutrition inclusive)		- OPM UNAP Secretariat - Sector Top/Senior Management - Implementing partners	
	Platforms and systems architecture ( <i>e.g. cloud based or locally hosted</i> )						
	Nature of technologies ( <i>open source or proprietary</i> )	- Dashboard					
	Databases used ( <i>Manual, oracle, MySQL, etc.</i> )						
	Means of systems development and acquisition ( <i>Off-shore, internal or external</i> )	- Support from Implementing partners					

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Data dissemination	Framework of nutrition data collection and integration in the sector	<ul style="list-style-type: none"> <li>- Information collected by M&amp;E</li> <li>- Information obtained from the DNCCs and SNCCs</li> <li>- Inter-ministerial multi-sectoral nutrition coordination committee</li> </ul>	<ul style="list-style-type: none"> <li>- This information should be integrated into functionalized Multi-sectoral reporting platforms (through the multi-sectoral working group)</li> <li>- Further utilization of the DNCCs in the districts for reporting and follow up on district plans</li> </ul>	<ul style="list-style-type: none"> <li>- Strengthening of UNAP coordination role of OPM</li> <li>- Strengthening of Multi-sectoral M&amp;E framework</li> </ul>		<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- Senior Management</li> <li>- Implementing partners</li> </ul>	
	Channels of information dissemination ( <i>Radios, TV, Websites, etc.</i> )	<ul style="list-style-type: none"> <li>- Sector nutrition committee monthly, quarterly meetings</li> <li>- Dissemination of survey findings at different platforms</li> <li>- Website</li> <li>- Media (print and TV)</li> <li>- National days' commemorations</li> </ul>		<ul style="list-style-type: none"> <li>- Tracking reach of messages and measure of impact</li> </ul>	<ul style="list-style-type: none"> <li>- Strengthening existing media dissemination monitoring</li> </ul>	<ul style="list-style-type: none"> <li>- UNAP Secretariat</li> <li>- Development and Implementing partners</li> </ul>	
	Collaboration practices	<ul style="list-style-type: none"> <li>- Partner-led learning and information sharing platforms</li> </ul>			<ul style="list-style-type: none"> <li>- Strengthening of the Multi-sectoral technical working group</li> </ul>	<ul style="list-style-type: none"> <li>- UNAP Secretariat</li> <li>- Implementing partners</li> </ul>	
Financial resources	Overall institutional budget for	<ul style="list-style-type: none"> <li>- Sector development plans include</li> </ul>	<ul style="list-style-type: none"> <li>- Plans should cater specifically to nutrition specific, sensitive and governance</li> </ul>			<ul style="list-style-type: none"> <li>- Senior Management</li> <li>- OPM UNAP Secretariat</li> </ul>	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	information management	<ul style="list-style-type: none"> <li>components of the UNAP</li> <li>- Networking with Development Partners</li> <li>- Technical assistance from partners</li> </ul>	interventions and these included in the M&E framework			- Implementation partners	
	% of budget for information system staff development	- Integrated in the general staffing plans and budgets		-			
	% of budget for technology growth						

## Nutrition Information System Capacity Assessment Matrix – UNICEF

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance	Laws	-	-	-	-	-	-
<i>(External regulatory and Institutional environment)</i>	Regulations and Policies	<ul style="list-style-type: none"> <li>- Uganda Nutrition Policy</li> <li>- Uganda Nutrition Action Plan 2</li> <li>- Sustainable Development Goals (SDGs)</li> <li>- UNICEF Macro Nutrition Global strategies that feed into the Country development plan</li> </ul>	<ul style="list-style-type: none"> <li>- Finalization of the UNAP with a clear M&amp;E framework (data to be captured, by who, when and dissemination mechanisms) so WFP can take on aspects</li> </ul>	<ul style="list-style-type: none"> <li>- M&amp;E and reporting capacities</li> </ul>		<ul style="list-style-type: none"> <li>- OPM UNAP Secretariat</li> <li>- Nutrition Technical Working Group (NTWG)</li> <li>- Implementing partners</li> </ul>	
	Procedures						
	Data capture strategies	<ul style="list-style-type: none"> <li>- Existing Organization M&amp;E frameworks embedded in work plans</li> </ul>					
	Data integration frameworks	<ul style="list-style-type: none"> <li>- Technical assistance provided towards management of the HMIS</li> <li>- Surveys conducted in collaboration with the government</li> </ul>			<ul style="list-style-type: none"> <li>- Support training of M&amp;E personal (in sectors) on the usage of data management packages</li> </ul>	<ul style="list-style-type: none"> <li>- OPM UNAP secretariat</li> <li>- Partners (e.g. UNICEF)</li> </ul>	
Human resources <i>(Numbers, skills and competencies)</i>	Numbers of staff deployed for Nutrition information related activities	<ul style="list-style-type: none"> <li>- 1 NIPN focal person</li> <li>- M&amp;E Unit of which Nutrition is a component</li> </ul>					

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Skills of staff in nutrition function	<ul style="list-style-type: none"> <li>- Statistics</li> <li>- M&amp;E, Data Management</li> <li>- Data Analysis</li> <li>- Communication</li> </ul>	- Leverage on these capacities to support the Government of Uganda systems				
	Staff competencies	<ul style="list-style-type: none"> <li>- Conducting Assessments and surveys</li> <li>- Innovations</li> <li>- Data Management</li> <li>- Reporting</li> <li>- Communication</li> </ul>					
	Capacity building systems ( <i>e.g. staff training programmes and support structures</i> )	<ul style="list-style-type: none"> <li>- Programme driven trainings</li> <li>- Technical Assistance (trainings included) to the sectors</li> </ul>			- Ensure to include these in national training Programmes	- Partner and OPM UNAP Nutrition secretariat	
Technology platforms	Business systems and applications ( <i>Decision support systems, Information Management systems, etc.</i> )	<ul style="list-style-type: none"> <li>- NIPN Dashboard</li> <li>- Internal Nutrition Dashboard</li> <li>- Global Nutrition dash board</li> </ul> <p>however these are populated to a country's draft.</p>	- Involvement of the Nutrition Multi-stakeholders in the process			- Partner and OPM UNAP Nutrition Secretariat	
	platforms and systems architecture ( <i>e.g. cloud based or locally hosted</i> )						



Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Nature of technologies ( <i>open source or proprietary</i> )	- Systems are a mix of both “open source” and “propriety” technologies					
	Databases used ( <i>Manual, oracle, MySQL, etc.</i> )						
	Means of systems development and acquisition ( <i>Off-salve, internal or external</i> )						
Data dissemination	Framework of nutrition data collection and integration in the sector	- Evaluation researches - Surveys - Tech. support to data management of the HMS - Tech. support to policy formulation - FSNA's	- This information should be integrated into the Multi-sectoral reporting platforms (through the multi-sectoral working group)	- Advocate for operationalizing of the multi-sectoral working group		- Implementing partner	
	Channels of information dissemination ( <i>Radios, TV, Websites, etc.</i> )	- Nutrition Bulletins - Dissemination through national and international days e.g. <i>World Breast Feeding week, etc.</i> - Media: print and TV - Website					
	Collaboration practices	- Partner-led learning and collaborative events both at				- Nutrition Technical Working Group (NTWG)	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
		National and District levels				- Development and Implementing partners	
Financial resources	Overall institutional budget for information management	<ul style="list-style-type: none"> <li>- M&amp;E components are integrated in the annual work plans and budgets</li> <li>- Budget to provide Technical assistance to the government Programmes</li> <li>- Technical assistance e.g. inclusion of nutrition indicators in the HMIS</li> </ul>					
	% of budget for information system staff development	<ul style="list-style-type: none"> <li>- Integrated in the general staffing plans and budgets</li> </ul>		-			
	% of budget for technology growth						

### Nutrition Information System Capacity Assessment Matrix - UBOS

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance ( <i>External regulatory and Institutional environment</i> )	Laws	none	Good policies	Trainings, improvement in technology	Streamlining of indicators	Government of Uganda	Children, women, adolescents
	Regulations and Policies	none		Build capacity			
	Procedures	yes					
	Data capture strategies	yes		Improvement in technology			
	Data integration frameworks	yes		Training of staff			
Human resources ( <i>Numbers, skills and competencies</i> )	Numbers of staff deployed for Nutrition information related activities	7	8	Trainings			
	Skills of staff in nutrition function	N/A	N/A	Trainings			
	Staff competencies			A limited number have scanty information on nutrition			
	Capacity building systems ( <i>e.g. staff training programmes and support structures</i> )						
Technology platforms	Business systems and applications ( <i>Decision support systems, Information Management systems, etc.</i> )	Yes		Trainings	Web based dash boards, workshops, trainings		

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	platforms and systems architecture ( <i>e.g. cloud based or locally hosted</i> )	Yes		Trainings			
	Nature of technologies ( <i>open source or proprietary</i> )	Yes		Trainings			
	Databases used ( <i>Manual, oracle, MySQL, etc.</i> )	Yes		Trainings			
	Means of systems development and acquisition ( <i>Off-salve, internal or external</i> )	yes		Trainings	Web based dash boards, workshops, trainings		
Data dissemination	Framework of nutrition data collection and integration in the sector	yes	Work more with UNICEF, WFP, World Bank	Trainings	Web based dash boards, workshops, trainings		
	Channels of information dissemination ( <i>Radios, TV, Websites, etc.</i> )	Yes	Work more with UNICEF, WFP, World Bank	Trainings	Web based dash boards, workshops, trainings		
	Collaboration practices	Yes	Work more with UNICEF, WFP, World Bank	Trainings	Web based dash boards, workshops, trainings		
Financial resources	Overall institutional budget for information management	Yes	More funding	Training			

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	% of budget for information system staff development	Not known	More funding	Training			
	% of budget for technology growth	Not known	More funding	Training			

## Nutrition Information System Capacity Assessment Matrix- WOUGNET

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance <i>(External regulatory and Institutional environment)</i>	Laws	A number exists including the UCC Act, NITA-U act, Data protection Act 2018	A specific act on nutrition information	Passing of Nutrition Act		Parliament of Uganda	
	Regulations and Policies	Uganda Vision 2040, Uganda Nutrition Action Plan 2011-2016, The National ICT Policy, and sector specific strategizes		Support in Policy awareness among stakeholders		OPM, NPA	ICT
	Procedures	At WOUGNET we capture information from field activities as part of advocacy	Automation of data capture procedure to facilitate integration data access from all stakeholders especially	Streamlining of nutrition indicators and data visualization platforms	Development of integration for all actors in the sector	MoICT or NITA-U should coordinate	Procedures and automation
	Data capture strategies	Data is captured from entities like UBOS, NPC and MoH	Integrated data management systems and dashboards	Improvement in use of ICT	Harmonize data capture strategizes and Streamlining indicators		Automation
	Data integration frameworks	We're not aware of any	It is desired, given the nature of data capture and usage				
Human resources <i>(Numbers, skills and competencies)</i>	Numbers of staff deployed for Nutrition information related activities	We don't have a specific individual but the function is covered by 4 people include 2 field staff in our field offices, ICT and knowledge management functions	1 dedicated staff and one data scientist	At least 2 more dedicated staff to handle nutrition information but also skilling the existing staff in data science	More dedicated staff and skills in data science		

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Skills of staff in nutrition function	None	N/A				
	Staff competencies	ICT, advocacy, policy and strategy		Data analysis and advocacy			Staff training in data science and data mining
	Capacity building systems (e.g. staff training programmes and support structures)	A few career focused initiatives					
Technology platforms	Business systems and applications (Decision support systems, Information Management systems, etc.	We do not have largely manual systems			Acquisition of appropriate information systems		Automate field data capture systems
	platforms and systems architecture (e.g. cloud based or locally hosted)	Local					
	Nature of technologies (open source or proprietary)	Open source is preferred					

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	Databases used ( <i>Manual, oracle, MySQL, etc.</i> )	Manual and excel spread sheet					
	Means of systems development and acquisition ( <i>Off-salve, internal or external</i> )	None					
Data dissemination	Framework of nutrition data collection and integration in the sector	Through sector forums groups and advocacy programmes			Improved coordination among actors in the sector		
	Channels of information dissemination ( <i>Radios, TV, Websites, etc.</i> )	Reports, workshops, websites, radio, community functions, conferences among others			Use of social media, mass media and online data access platforms to enhance accessibility if this information		
	Collaboration practices	Currently WOUGNET collaborates with a number of partners both local and international in a spectrum of actions			Streaming the collaboration on nutrition information management		
Financial resources	Overall institutional budget for information management	No specific budget but embedded in programme activities	More funding is desired to facilitate technology platforms	Training			WOUGNET management



Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
			development and processes of data capture and processing				
	% of budget for information system staff development	Not known					
	% of budget for technology growth	Not known					

#### Nutrition Information System Capacity Assessment Matrix - NITA-U

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
Governance <i>(External regulatory and Institutional environment)</i>	Laws	The constitution, NITA-U Act, Electronic Transactions Act, Computer Misuse Action, Digital Signature Act, Vision 2040	Harmonization of policy environment	Passing of a nutrition Act.		Uganda government	
	Regulations and Policies	Uganda Vision 2040, Uganda Nutrition Action Plan 2011-2016, Digital vision Uganda, e-government regulations and guideline, among others		Policy awareness among stakeholders			
	Procedures	At NITA-U does not capture nutrition data.	Stakeholders need to be guided on how to comply with		Development of integration data capture	NITA-U can help on this	

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
		But provide guidelines especially the ego	the e-government architecture and the provisions of the Data privacy and protection Act 2018				
	Data capture strategies	We don't have any	N/a				
	Data integration frameworks	The e-government architecture					
Human resources <i>(Numbers, skills and competencies)</i>	Numbers of staff deployed for Nutrition information related activities	Our staff provide support to all government systems					
	Skills of staff in nutrition function	None					
	Staff competencies	ICT systems management, policy and strategy planning, data analysis, cyber security,					
	Capacity building systems <i>(e.g. staff training programmes and support structures)</i>	None					
Technology platforms	Business systems and applications <i>(Decision</i>	NITA-U hosts a number of government systems across the spectrum			Development of API's and data visualization dash board to		API's and data visualization

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	<i>support systems, Information Management systems, etc)</i>				enable integration of various systems hosting nutrition		
	platforms and systems architecture ( <i>e.g. cloud based or locally hosted</i> )	Given the e-government policy most systems are housed at NITA-U data Centre (cloud base architecture). Some systems are local hosted					
	Nature of technologies ( <i>open source or proprietary</i> )	Government promotes use of open source technologies		Trainings			
	Databases used ( <i>Manual, oracle, MySQL, etc.</i> )	All major technologies					
	Means of systems development and acquisition ( <i>Off-salve, internal or external</i> )	A mix of approaches					
Data dissemination	Framework of nutrition data collection and integration in the sector	None for nutrition					
	Channels of information dissemination						

Dimension	Capacity Area	Current situation	Desired situation	Capacity development needs	Suggested Interventions	Responsible Actors	Priorities
	<i>(Radios, TV, Websites, etc)</i>						
	Collaboration practices	NITA-U collaborates with a wider range of stakeholders					
Financial resources	Overall institutional budget for information management	Budget is integrated in functional units of NITA-U like the data center, NBI, etc.					
	% of budget for information system staff development	Not provide					
	% of budget for technology growth	Not provided					