Overview of the Nutrition Information System in UGANDA
ABOUT THE NIPN INITIATIVE

National Information Platforms for Nutrition (NIPN) is an initiative of the European Commission supported by the United Kingdom Department for International Development and the Bill & Melinda Gates Foundation. The initiative aims to strengthen national capacity to manage and analyse information and data from all sectors which have an influence on nutrition and to disseminate and use information so as to better inform the strategic decisions countries are faced with to prevent undernutrition and its consequences. A Global Support Facility has been set up by the European Commission to coordinate the NIPN initiative, managed by the Agrinatura alliance and hosted by Agropolis International.

DISCLAIMER

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The first section of this document is a summary that can be printed separately. The full report can be downloaded here: http://www.NIPN-nutrition-platforms.org/IMG/pdf/nutrition-info-system-uganda.pdf
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Introduction

This report presents the findings for Uganda of a study commissioned by the Global Support Facility of the National Information Platforms for Nutrition (NIPN) initiative; to assess the design, processes and practices related to data handling and usage from existing nutrition-related information management systems.

The summarized findings are presented in 4 sections:

■ Section 1: Global parameters
  Key parameters of the Nutrition Information System have been assessed and are presented in a synthetic table.

■ Section II: Mapping of existing information systems
  Sectoral and multi-sectoral information systems that can be relevant to nutrition have been identified and are described in this section. A table summarizes the findings.

■ Section III: Indicator mapping
  17 multisectoral “key indicators” were arbitrary selected to represent multi-sectoral information important for Nutrition. For those indicators, the institution(s) in charge of data collection / quality review / analysis and dissemination were identified.

■ Section IV: Mapping of the main stakeholders identified

The assessment followed key steps:

1. Creation of a questionnaire
2. Pre-populating the questionnaire with available country-specific information (including the work undertaken by SUN available here: https://scalingupnutrition.org/share-learn/planning-and-implementation/information-systems-for-nutrition/)
3. Interviews with main stakeholders (held between 1st - 30th Sep 2018)
4. Thorough investigation of open access/publicly available information
5. Report compilation
### Section I: Global Parameters

<table>
<thead>
<tr>
<th>Parameters assessed</th>
<th>Situation in Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existence of any IT system for Central Data Repository</td>
<td>None</td>
</tr>
<tr>
<td>Access to raw data/ metadata across IT systems</td>
<td>Unsatisfactory</td>
</tr>
<tr>
<td>Frequency of Data updation on existing IT systems</td>
<td>Unsatisfactory</td>
</tr>
<tr>
<td>Analysis of available nutrition-related data</td>
<td>Partial (Limited analyses of existing datasets)</td>
</tr>
<tr>
<td>Data exchange capability between IT systems</td>
<td>Mostly non-existent</td>
</tr>
<tr>
<td>Presentation of summary statistics on existing IT systems</td>
<td>Available for some IT systems (DHIS2, STATcompiler)</td>
</tr>
<tr>
<td>Existence of IT systems</td>
<td>Available (sector-specific)</td>
</tr>
<tr>
<td>Infrastructure for efficient data reporting (Computers/ Internet)</td>
<td>Likely existing (No gaps highlighted)</td>
</tr>
<tr>
<td>Availability of Standard Reporting Tools</td>
<td>Likely existing (No gaps highlighted)</td>
</tr>
<tr>
<td>Type of Data collection- (Hardcopy-based/ Digital)</td>
<td>Mostly hardcopy-based</td>
</tr>
<tr>
<td>Tools used for nutrition-related Data Consolidation</td>
<td>MS Excel, Statistical Software: STATA, IT System: DHIS2, STATcompiler</td>
</tr>
<tr>
<td>Data Analytics/ Reporting &amp; Dashboard</td>
<td>DHIS2, STATcompiler</td>
</tr>
<tr>
<td>Level of Program Coverage across the country</td>
<td>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)</td>
</tr>
<tr>
<td>Plan for a Multi-sectoral nutrition-related Data repository in place</td>
<td>Yes, Uganda NIPN (UNIPN)</td>
</tr>
<tr>
<td>Existence of Data sharing law/ Policy</td>
<td>Not yet</td>
</tr>
<tr>
<td>A compliant data exchange mechanism/ guideline</td>
<td>Absent</td>
</tr>
<tr>
<td>National Budget allocated for Nutrition-related interventions</td>
<td>Yes</td>
</tr>
<tr>
<td>Major sources of nutrition-related Data</td>
<td>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</td>
</tr>
<tr>
<td>Presence of a Governing body for inter-sectoral coordination of nutrition in Uganda</td>
<td>Yes, OPM</td>
</tr>
</tbody>
</table>
Section II: Mapping of existing information systems

Current Nutrition Environment in Uganda

A food and nutrition policy was developed by the Govt. of Uganda in 2003. To further address country’s nutrition-related goals, the 5-year Uganda Nutrition Action Plan (UNAP) 2011-2016, was developed and introduced with assistance from FANTA (Food and Nutrition Technical Assistance), which was extended till the end of 2017. UNAP-I was developed with the primary intention of reducing the prevalence of malnutrition and its impact in all Uganda, specifically targeting the most vulnerable/susceptible population which is women of reproductive age, young children, and infants. Although UNAP-I has been successful in bringing down malnutrition prevalence to some extent, concerted efforts need to be made in order to completely rule out malnutrition’s repercussions on households, communities and the socioeconomic development of the country at large. Relevant to this, the plan for structuring UNAP-II is underway, the Govt. of Uganda is currently designing and finalizing the prospect of UNAP-II’s implementation in the near future. Below is a brief overview of the existing IT systems, the associated technical details and the information (indicators) captured by these systems (wherever accessible).

Uganda Integrated Nutrition Information System (UINIS-2010)

Description of the IT system: UINIS was designed with an intention to improve health and nutritional status of Ugandans through optimized national nutrition policy and program decision making process by the creation of a national nutrition information system. However, this system never got implemented since its conception in 2010. In 2017 additional design work on a nutrition information system was carried out, but no such system got implemented as well.

➤ Technical Details: n/a (as the system was never implemented)
➤ Indicators: n/a (as the system was never implemented)

Health Management Information System (HMIS) on DHIS2 platform

➤ Description of the IT system: The HMIS primarily records information on patients who visit health centers and by its nature, is not representative of the general population. The HMIS is also expected to capture community-based nutrition data, however the current reporting rates for community-based data are low and require improvements. The Ministry of Health, Dept. of Planning, Resource Centre is primarily responsible for developing and maintaining HMIS.

➤ Technical Details: The HMIS represents aggregated data rolled out on a national level and is hosted on cloud. The system is currently being revised and updated. Data has restricted access and is accessible to MoH and selected partners only. It is currently being used as a data entry tool for nutrition-related data, as it does not have a dashboard functionality for the nutrition-related data as yet.

➤ Indicators: Out of the 17 core NIPN indicators, four indicators falling under ‘List 3: Interventions and Food Supply Indicators’ are captured on HMIS. As HMIS has restricted access (as seen below), a detailed list of the indicators being captured by HMIS is beyond the scope of this report. The IT system can be found here: https://hmis10.health.go.ug/hmis2backup/dhis-web-commons/security/login.action
The Education Management Information System (EMIS)

**Description of the IT system:** Results generated by this system are being used in monitoring progress in improving education in the country. To address statistical requirements, AED/Aurecon have deployed an EMIS. Building on what the EMIS has put in place, Aurecon’s objective was to address outstanding operational weaknesses and achieve up-to-date statistical information in the education sector.

**Technical Details:** EMIS is rolled out on a national level. Aurecon provided technical support to the ministry of Education and Sports (MoES) in supporting the management of the EMIS, to ensure that undertakings on monitoring and evaluation for Education Strategic Investment Plan (ESIP) were met, and provided technical support and capacity building in statistics to MoES Head Office and districts. The format of data representation, data access rights and details regarding its hosting and last update is unknown as a weblink to the EMIS database could not be identified from the MoES website: [http://education.go.ug/data/smenu/2/EMIS%20Statistics.html](http://education.go.ug/data/smenu/2/EMIS%20Statistics.html)
Nutrition information system in Uganda

- **Indicators:** None of the core 17 NIPN indicators are captured on EMIS. A list of the indicators that are being captured by EMIS is presented in Annexure 3 (as identified from 'EMIS Factsheet 2002-2016 report' available here: [http://education.go.ug/data/dcat/2/Data-and-Statistics.html](http://education.go.ug/data/dcat/2/Data-and-Statistics.html))

Local Government Information and Communication System (LOGICS)

- **Description of the IT system:** This IT system is intended to be used by the local government personalos for effective planning, budgeting and preparation of reports and work plans.

- **Technical Details:** Although, the Ministry of Local Government (MoLG) is in charge of managing this system, the link to LOGICS on the Ministry webpage [http://www.molg.go.ug/project/local-government-information-and-communication-system](http://www.molg.go.ug/project/local-government-information-and-communication-system) opens up to a blank page (as seen below). The technical details are therefore unknown.

- **Indicators:** None of the core 17 NIPN indicators are captured on LOGICS. As a functional weblink for LOGICS isn’t available, a detailed list of the indicators being captured by HMIS is beyond the scope of this report.

Famine Early Warning Systems Network (FEWS NET)

- **Description of the system:** The Famine Early Warning Systems Network is a leading provider of early warning and analysis on food insecurity. It is created and maintained by USAID and partners to help decision-makers plan for humanitarian crises, FEWS NET provides evidence-based analysis on close to 34 countries including Uganda. This system collects information from multiple sources for early warning. Data sources are relevant to food security and nutrition; and data from FEWS NET is used for Uganda Early Warning System as well.

- **Technical Details:** The FEWS NET represents aggregated data rolled out on a national level and is hosted on out of country premises. Data from multiple sources is used to first estimate future food security outcomes to next predict an early warning on food security situation. FEWS NET can be found here [http://fews.net/east-africa/uganda](http://fews.net/east-africa/uganda)
Indicators: None of the core 17 NIPN indicators are captured on FEWS NET. The weblink for FEWS NET was not indicative of a list of indicators that is explicitly considered by this system to make food security projections/predict warning situations. These are therefore currently unknown.

Water Management Information System (WMIS)

Description of the IT system: WMIS deals with information related to Uganda’s water resource management. Data from this system is used in the Uganda Early Warning System as well. Ministry of Water and Environment [http://www.mwe.go.ug/library/directorate-water-resource-management](http://www.mwe.go.ug/library/directorate-water-resource-management) is responsible for the maintenance of this IT system.

Technical Details: Details regarding the extent of roll out and the level of data representation is unknown. Also unknown is the detail regarding this IT system’s hosting status. It is however known that data access is restricted, limited to defined user groups only (as seen below) as seen here [http://wateruganda.com/index.php/login](http://wateruganda.com/index.php/login)
Indicators: None out of the key 17 NIPN indicators are captured on WMIS. As WMIS has restricted access (as seen above), a detailed list of the indicators being captured by WMIS is beyond the scope of this report.

SCOPE and SCOPECODA

Description of the IT system: It is a beneficiary IT system for Integrated Management of Acute Malnutrition. SCOPE CODA 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. Building upon WFP’s (World Food Programme) existing beneficiary management system, SCOPE the application that provides a unified platform for monitoring and improving performance through improved data quality and increased data utilization. SCOPE CODA follows the IMAM treatment protocol, and works in lines of allowing frontline workers to record information; track an individual’s nutrition and health status; identify when a person has recovered; and indicate whether the treatment has been successful. The process involves an electronic database and a personal smartcard, given to each beneficiary upon enrolment that holds treatment details required for follow up.

Technical Details: The IT system represents aggregated data rolled out on a pilot level (in the Moroto district) and is hosted outside country premises. The system was updated fairly recently in 2018. Data has restricted access and is accessible to WFP and selected partners only. The MoH with support from WFP is responsible for the maintenance of this beneficiary IT system. SCOPE CODA can be found here: https://innovation.wfp.org/project/scope-coda
Indicators: None out of the core 17 NIPN indicators are captured on this IT system. The weblink for SCOPE CODA (as seen above) was not indicative of a list of indicators that are currently being captured. These are therefore currently unknown.

Crop Monitor (a GEOGLAM Initiative) for AMIS and Early Warning

Description of the IT system: The role of GEOGLAM is to coordinate satellite monitoring observation systems in different regions of the world in order to enhance crop production projections and weather forecasting data. In the same line, AMIS (Agricultural Monitoring Information System) assesses global food supplies (focusing on wheat, maize, rice and soybeans) and provides a platform to coordinate policy action in times of market uncertainty. The GEOGLAM initiative is designed to build on existing agricultural monitoring programs and initiatives at national, regional and global levels and to enhance and strengthen them through international networking, operationally focused research, and data/method sharing. Within this framework, GEOGLAM developed the Crop Monitor reports that provide global crop condition assessments in support of the AMIS market monitoring activities. Given the success of the AMIS Crop Monitor, in 2016, GEOGLAM developed the Early Warning Crop Monitor. The Early Warning Crop Monitor brings together international, regional, and national organizations monitoring crop conditions within countries at risk of food insecurity, of which Uganda is one.

Technical Details: The dashboard for Crop Monitor Early Warning and Crop Monitor AMIS has restricted access (as seen below). Dashboard is probably hosted in outside country premises. The institution responsible for maintaining these dashboards is currently unknown, and so is the level of data representation for Uganda as part of these systems. G20 Heads of States is the likely overall governing body for this initiative.

Indicators: None of the key 17 NIPN indicators are captured on this IT system. As there is restricted access (as seen above), a detailed list of the indicators being captured by Crop Monitor is beyond the scope of this report. The IT system(s) can be found here:

https://cropmonitor.org/interfaces/EarlyWarning/login.php
https://cropmonitor.org/interfaces/AMIS/login.php
InfoTrade

- Agricultural Market Information System (AGMIS)
- Localised Market Information System (LAMIS)
- Farmer Record Management Information System (FARMIS)

**Description of the IT system:** InfoTrade is a platform (Agricultural market information system) built to integrate collection, analysis and dissemination of agricultural and other market information in Uganda. InfoTrade has since built platforms that allow one access real time agricultural market data through the internet and the mobile phone. AGMIS, LAMIS and FARMIS are some of the products that InfoTrade has to offer.

AGMIS is an on-line platform that gives access to more information collected at InfoTrade. While the InfoTrade website gives average commodity prices, AgMIS allows one to break down prices to district and market level. Like AgMIS, LAMIS (Localised MIS) is an online platform built for organizations involved in market information collection. This customized platform allows one to add one’s own markets and generate reports specific to one’s needs. LAMIS users are also able to access summary market information collected by other LAMIS users and all other information in the AgMIS.

FARMIS (Farmer Record Management System) is designed for the farmer who would like to be able to calculate how many seeds he brought, or the percentage of farm land on which he planted fresh beans, or how much of his load he has paid, and so on. FARMIS does all this. Details of this platform can be found here: [http://www.infotradeuganda.com/index.php/products.html](http://www.infotradeuganda.com/index.php/products.html)

**Technical Details:** AGMIS is an on-line platform that incorporates market information collected from different information providers ([http://www.infotradeuganda.com/index.php/products/agmis.html](http://www.infotradeuganda.com/index.php/products/agmis.html)). This platform is also used by field officers to carry out on spot data entry from wherever they are allowing you to access real time data the moment it is added (needs user sign up and access).
FARMIS is an online application (http://www.infotradeuganda.com/index.php/products/farmis.html) that provides one with tools to carry out production data management for better planning. However, owing a user account on FARMIS is chargeable.

The Infotrade IT systems are hosted within country premises. It is currently rolled out at all major districts in Uganda.

**Indicators:** None out of the key 17 NIPN indicators are captured on this IT system. The weblink for Infotrade systems (as seen above) have restricted access and also do not indicate a list of indicators that gets captured, these are therefore currently unknown.
**STATcompiler**

- **Description of the IT system:** STATcompiler is a DHS Program that allows users to make custom tables based on thousands of demographic and health indicators across many countries (90 to be precise), of which Uganda is one. It allows for customization of tables to view indicators by background characteristics, over time, and across countries.

- **Technical Details:** STATcompiler ([https://www.statcompiler.com/en/](https://www.statcompiler.com/en/)) represents aggregated DHS (survey) data rolled out on a national level and is hosted on outside country premises. The system is a brainchild of USAID and is being maintained by the same. Data access seems to be of open access.

- **Indicators:** 10 out of the 17 core NIPN indicators are reported on STATcompiler. These belong to the SUN MEAL indicator Lists 5, 6, 7 and 8. A consolidated list of the indicators that are being captured by STAT compiler is available here: [https://www.statcompiler.com/en/](https://www.statcompiler.com/en/)
Table 1. Summarised overview of existing IT systems

<table>
<thead>
<tr>
<th>SYSTEM NAME</th>
<th>UNIMS</th>
<th>HMIS</th>
<th>EMIS</th>
<th>LOGICS</th>
<th>FEWS NET</th>
<th>WIMS</th>
<th>LOGICAL</th>
<th>SCOPE and SCOPE Early Warning</th>
<th>CODA</th>
<th>Crop Monitor for AMIS Early Warning</th>
<th>InfoTrade</th>
<th>STATcompiler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Status</td>
<td>Never got implemented</td>
<td>Implemented</td>
<td>Implemented</td>
<td>Implemented</td>
<td>Implemented</td>
<td>Implemented</td>
<td>Implemented</td>
<td>Implemented</td>
<td>Implemented</td>
<td>Implemented</td>
<td>Implemented</td>
<td>Implemented</td>
</tr>
<tr>
<td>Indicator coverage (17 SUN MEAL Indicators)</td>
<td>None</td>
<td>4 out of 17 SUN MEAL indicators</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Which Ministry/Dept developed it?</td>
<td>n/a</td>
<td>MoH, Dept. of Planning, Resource Centre</td>
<td>Education Planning Department, MoES</td>
<td>Ministry of Local Government (MoLG)</td>
<td>USAID and partners</td>
<td>Ministry of Water and Environment</td>
<td>MoH with support from WFP</td>
<td>National organizations monitoring crop conditions</td>
<td>FIT Uganda Ltd in partnership with Agricultural Sector Program Support</td>
<td>USAID</td>
<td>Unknown</td>
<td>n/a</td>
</tr>
<tr>
<td>Data Access</td>
<td>n/a</td>
<td>MoH and selected partners</td>
<td>Restricted</td>
<td>unknown</td>
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<td>Restricted</td>
<td>n/a</td>
<td>Restricted</td>
<td>WFP</td>
<td>Restricted</td>
<td>Restricted</td>
<td>Unknown</td>
</tr>
<tr>
<td>Hosted at?</td>
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<td>Cloud</td>
<td>Unknown</td>
<td>Unknown</td>
<td>n/a</td>
<td>Unknown</td>
<td>n/a</td>
<td>Unknown</td>
<td>Out of country</td>
<td>Within country premises</td>
<td>Restricted</td>
<td>Out of country</td>
</tr>
<tr>
<td>Individual/Aggregate</td>
<td>n/a</td>
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<td>Unknown</td>
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</tr>
<tr>
<td>Data last updated</td>
<td>n/a</td>
<td>Currently being revised and updated</td>
<td>Unknown</td>
<td>Unknown</td>
<td>n/a</td>
<td>Unknown</td>
<td>Unknown</td>
<td>2018</td>
<td>n/a as supposed to be Real time</td>
<td>n/a</td>
<td>2016 (upto the last DHS survey)</td>
<td>Unknown</td>
</tr>
<tr>
<td>Scale of rolling out</td>
<td>n/a</td>
<td>National</td>
<td>National</td>
<td>Unknown</td>
<td>National</td>
<td>Unknown</td>
<td>National</td>
<td>Pilot</td>
<td>National</td>
<td>Major Districts</td>
<td>National</td>
<td>National</td>
</tr>
</tbody>
</table>

10 out of 17 SUN MEAL indicators
Summary

This report presents the findings for Uganda of a study commissioned by the Global Support Facility of the National Information Platforms for Nutrition (NIPN) initiative; to assess the design, processes and practices related to data handling and usage from existing nutrition-related information management systems.