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Mapping Information Systems for Nutrition in SUN Countries

Overview of Methods and Sources

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Introduction

National nutrition information systems are essential for assessing the current status and measuring changes in nutritional status of populations, tracking progress of actions taken to improve nutrition, and prioritizing efforts toward improving nutrition (Scaling Up Nutrition (SUN), 2014a). An accurate assessment of the nutrition situation allows governments and their development partners to make evidence-based decisions with regards to nutrition policy and program development. Nutrition information is useful for advocacy, planning, budgeting, program design, and monitoring and evaluation. Additionally having a greater understanding of nutrition-related needs and program reach allows for improved collaboration and efficiency amongst the various stakeholders (Food and Agriculture Organization (FAO), 2015).

The objective of this work is to map the information systems for nutrition in SUN countries in collaboration with other actors. Based on the information available, we seek to define a framework that will categorize the typology and state of advancement of the information systems/platforms in the SUN countries and identify specific needs.

The mapping research was carried out by a team of Nutrition International consultants during the period of July to December 2016, under the guidance of representatives from the SUN Movement Secretariat, and with the financial support of the TAN project (Nutrition International).

Methodology

Information systems for nutrition are complex and vary widely across countries. We developed a list of indicators that were expected to correspond with the essential components of a functional and effective national nutrition information system. These indicators were grouped under three components: 1) government commitment and coordination; 2) national assessment data; and 3) national performance monitoring data for nutrition (see Figure 1).

1. GOVERNMENT COMMITMENT & ENABLING ENVIRONMENT

The first component, Government Commitment & Enabling Environment, seeks to summarize the extent to which a country has established a governance mechanism to prioritize, collect, access and use data and information on nutrition. The majority of information is derived from government sources and is relied heavily upon by other stakeholders working to improve nutrition. The level of commitment that a government has in providing representative, complete and publicly accessible data on the nutrition situation contributes greatly to the development and implementation of effective nutrition policies, strategies and programmes.

We look first of all at each country's Common Results Framework (CRF) and determine

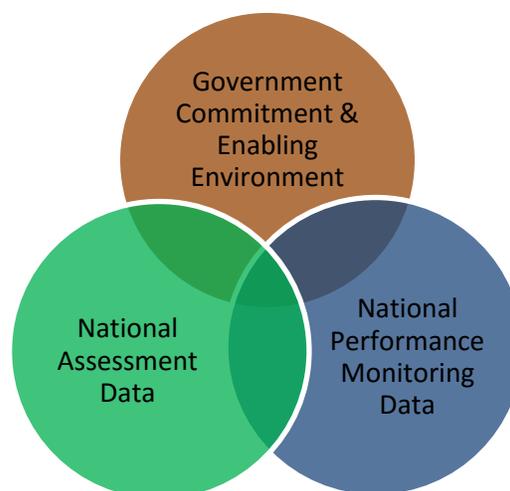


FIGURE 1: INFORMATION SYSTEMS FOR NUTRITION FRAMEWORK

whether there is an agreed Monitoring & Evaluation framework in place that includes specific nutrition indicators to monitor and evaluate the effectiveness of implemented programs (FAO, 2005). These documents are useful for clearly articulating the specific nutrition data to be gathered from multiple sources in order to inform multi-sectoral responses. Another indicator in this component assesses whether the country has conducted a budget analysis to review allocations for nutrition in the national budget in order to identify gaps and support resource mobilization.

SUN countries are aiming to meet by 2025 the World Health Assembly (WHA) global targets for improving maternal, infant and young child nutrition (WHO 2014a). Inclusion of these goals in national policies and strategies is essential for ensuring that information systems measure progress toward the agreed targets. We assess the number of WHA global nutrition targets included in the country's CRF and M&E Framework. We also assess whether the country is tracking progress in the prevention and control of major non-communicable diseases (NCD) using three nutrition-specific NCD targets: overweight and obesity in adults, diabetes and population salt intake.

Finally, as indicators of the coordination of nutrition information, we assess whether the government has designated a ministry or department to coordinate nutrition information from various sources, established a central repository for nutrition data and reports to be published and shared, and made this repository publicly accessible. We also assess whether a mapping of nutrition stakeholders has been conducted in order to improve coordination.

2. NATIONAL ASSESSMENT DATA

The second component, National Assessment Data, looks at what types of national surveys and surveillance systems are being used to provide an overall picture of the nutrition situation across the country. We assessed whether countries are collecting national population-based data using the Demographic Health Survey (DHS), the Multiple Indicator Cluster Survey (MICS) (UNICEF, 2013) or the Standardized Monitoring and Assessment of Relief and Transitions (SMART) survey methodology (national level only). In many countries, these surveys are the principal source of data on nutrition specific indicators including anthropometric measures, infant and young child feeding practices, and micronutrient intervention coverage (vitamin A and iron supplementation, iodized salt, zinc supplements for child diarrhea treatment) (DHS, 2016) as well as nutrition sensitive indicators such as water and sanitation practices, and quality and access to antenatal care (Hancioglu & Arnold, 2015).

We also assess whether a country has conducted a national micronutrient or fortification survey in the past ten years. These surveys are important sources of information on the prevalence and distribution of micronutrient deficiencies (e.g. iron, folate, vitamin A, and iodine) in pregnant women, women of reproductive age, children under five years of age and other nutritionally vulnerable groups.

Other surveys, such as food consumption, food security or vulnerability mapping provide important information on national food-related issues. We assess whether the country has conducted some form of Household Consumption and Expenditure Survey (HCES) in the past five years, which include indicators of household food consumption. This includes the Living Standards Measurement Surveys that assess household food consumption, anthropometric

measures and breastfeeding practices (World Bank, 2016). We also assess if a country has conducted food security and vulnerability mapping, conducted through various survey methods by the World Food Program, which provides data on food security concerns and vulnerable populations (WFP, 2016).

3. NATIONAL PERFORMANCE MONITORING DATA

The third component, National Performance Monitoring Data, focuses on the systems in place to routinely monitor coverage of services and programmes in various sectors for accurate progress tracking and prioritization of future efforts (SUN, 2014b). Strong monitoring and reporting of programme performance requires robust and quality routine information systems (UNICEF 2014). As data sources, we look at both nutrition-specific interventions and programmes as well as other sectors relevant to nutrition.

For nutrition-specific interventions, we assess whether routine coverage data is collected for a shortlist of essential maternal and child nutrition interventions (Bhutta et al., 2013; WHO, 2013a). These include interventions delivered through health facilities and monitored through HMIS as well as other programme indicators for nutrition interventions that may be monitored through other means.

Information systems in other key sectors for nutrition are a valuable source of data for context-specific analyses. We assessed whether data is available from Management Information Systems in these other sectors, including health (HMIS), agriculture and food (AMIS), education (EMIS), water, sanitation and hygiene (WASH), social protection programmes and early childhood development.

Data Collection Process and Sources

To obtain data on each indicator for the 57 SUN countries, we searched on the internet for credible, up-to-date, and publicly available data sources. Wherever possible, we used sources that were comparable across countries. If no multi-country synthesized source of information was found, then we used country-specific sources, including government websites and reports, UN organization reports, research articles or other civil society organization reports.

Table 1 below provides a detailed list of the indicators along with how each one was defined and what data sources were used to collect information for each country.

Table 1: Detailed List of Indicator Definitions and Sources of Data

INDICATOR	DEFINITION	SOURCE
1. GOVERNMENT COMMITMENT & ENABLING ENVIRONMENT		
1.1 Policy & Planning Documents		
1.1.1 Existence of Common Results Framework (CRF)	A Common Results Framework has been developed (including draft documents), based on records kept by the SUN Movement Secretariat	SMS records
1.1.2 Existence of an agreed M&E framework	A Monitoring and Evaluation framework has been developed, based on records kept by the SUN Movement Secretariat	SMS records (SUN M&E Frameworks tracking document)
1.1.3 Budgeting for nutrition		
1.1.3.1 Performed the budget analysis once	Country did the SUN budget analysis, based on records kept by the SUN Movement Secretariat	SMS records
1.1.3.2 Repeated the budget analysis for a second time		SMS records
1.1.3.3 Shows trends (more than one data point)		SMS records
1.1.3.4 Shows funding sources		SMS records
1.1.3.5 Shows actual expenditures		SMS records
1.1.3.6 Identified nutrition specific allocations		SMS records
1.1.3.7 Includes \geq 3 sectors		SMS records
1.2 Global nutrition targets tracked		
1.2.1 World Health Assembly global targets for nutrition	WHA targets are explicitly mentioned in country policy/strategy documents as key indicators to be assessed <i>[NB: not verified if actually being tracked]:</i> <ul style="list-style-type: none"> • Stunting in children under five years • Anemia in women of reproductive age • Birth weight in newborns • Overweight in children under five years • Breastfeeding in children under six months • Acute Malnutrition in children under five years 	Country CRF or M&E Framework
1.2.2 NCD nutrition-related targets	Indicators are explicitly mentioned in country policy/strategy documents as key indicators to be assessed <i>[NB: not verified if actually being tracked]:</i> <ul style="list-style-type: none"> • Overweight/Obesity in adults (or at least among women of reproductive age) • Diabetes • Salt intake 	Country CRF or M&E Framework
1.3 Institutionalization & coordination of nutrition information system		
1.3.1 Government ministry/department designated for coordination	Government ministry/department responsible for managing or coordinating the national nutrition information system	Consultant analysis of information available on country-specific websites
1.3.2 Central repository for information and reports	Central repository exists online, reports/data are relatively recent (2-3 years) and links to data/reports are functional	Consultant analysis of information available on country-specific websites
1.3.3 Publically accessible information	Data accessible to the public (no login/password required)	Consultant attempt to access reports or data in country's online repository
1.3.4 Stakeholder Mapping conducted		
1.3.4.1 Done by SUN Civil Society Network		UN Network, SUN Networks
1.3.4.2 Done by SUN Business Network		
1.3.4.3 Done by UNNetwork		
- REACH Mapping		
- UN Inventory		
- Stakeholder and Action Mapping		

INDICATOR	DEFINITION	SOURCE
2. NATIONAL ASSESSMENT DATA		
2.1 National health & demographic surveys		
2.1.1 Demographic Health Survey	DHS conducted within the past 5 years (2010 or more recent)	DHS Program (dhsprogram.com)
2.1.2 Multiple Indicator Cluster Survey	MICS conducted within the past 5 years (2010 or more recent)	UNICEF http://mics.unicef.org/surveys
2.1.3 National SMART Surveys	Evidence that country has ever conducted a SMART survey at a national scale	NIPN Country Reports; SMART Year in Review 2015
2.2 Micronutrient/Fortification Survey	A nationally representative assessment of at least one micronutrient or fortification, with data collection within the past 10 years (2005 or more recent). DHS/MICS survey data on micronutrient status was not included here.	Consultant analysis of information available online, including tracking of micronutrient surveys by iZinCG (http://www.izincg.org/countries-serum-zinc-data/). GAIN (FACT surveys) – personal communication with Greg Garrett & Valerie Neufeld
2.3 National Food Surveys		
2.3.1 Food Consumption Surveys	A national household survey conducted within the last 5 years that includes assessment of food consumption data. Household Consumption & Expenditure Survey encompasses different types of surveys, such as household income and expenditure surveys, household expenditure surveys, household budget surveys, and Living Standard Measurement Studies.	International Household Survey Network (IHSN) Survey Catalog (http://catalog.ihsn.org/index.php/catalog), World Bank Living Standard Measurement Study
2.3.2 Food security and vulnerability assessment	National assessment of food security or vulnerability mapping conducted within the past 5 years (2010 or more recent), including WFP mobile Vulnerability Analysis and Mapping (VAM), CFSVA, CFSS, FSVA.	WFP http://vam.wfp.org/ https://www.wfp.org/food-security/assessments/comprehensive-food-security-vulnerability-analysis
3. NATIONAL PERFORMANCE MONITORING DATA		
3.1.1 Micronutrient supplementation during pregnancy	Any form of micronutrient supplementation provided through health facilities to pregnant women (normally through ANC visits)	National M&E Framework, HMIS
3.1.2 Food supplementation during pregnancy	Any type of protein/energy food supplementation provided to pregnant women	National M&E Framework
3.1.3 Breastfeeding promotion		
3.1.3.1 Facility-based (HMIS)	Country-reported data on whether breastfeeding counseling in antenatal care indicator is monitored and/or reported in the health management information system	Nutridash 2015 (Unicef), National M&E Framework
3.1.3.2 Community level	Country-reported data on whether breastfeeding counseling in antenatal care indicator is monitored and/or reported at the community level	Nutridash 2015 (Unicef)
3.1.4 IYCF counseling		
3.1.4.1 Facility-based (HMIS)	Country-reported data on whether IYCF counseling for mothers of children 0-24 months indicator is monitored and/or reported in the health management information system	National M&E Framework, Nutridash 2015 (Unicef)
3.1.4.2 Community level	Country-reported data on whether IYCF counseling for mothers of children 0-24 months indicator is monitored and/or reported at the community level	Nutridash 2015 (Unicef)
3.1.5 Vitamin A supplementation to children under 5 years		
3.1.5.1 Facility-based (HMIS)	Vitamin A supplement delivery to children under 5 years monitored through health facility-based services	HMIS or National M&E Framework
3.1.5.2 Campaign/Health Weeks	Country has documented VAS coverage in 2014 (database updated Nov-2015)	Unicef Vitamin A Supplementation Global Database (http://data.unicef.org/wp-content/uploads/2015/12/child-nutrition_vitamin-A-supplementation.xlsx)

INDICATOR	DEFINITION	SOURCE
		(no data available for Guinea, Kyrgyzstan, Namibia, PNG, Togo & Zambia)
3.1.6 Detection & management of acute malnutrition children under 5		
3.1.6.1 Detection/ surveillance of acute malnutrition	National system of surveillance of acute malnutrition, either stand-alone or facility-based	Country sources (Google search for country information on national surveillance system) National M&E Framework Nutridash 2015 (Unicef)
3.1.6.2 Facility-based management of acute malnutrition (coverage)	Country-reported data on whether severe acute malnutrition (SAM) outpatient admissions are reported in the health management information system	HMIS National M&E Framework
3.1.6.3 CMAM coverage (Coverage Monitoring Network)	Coverage of Community-based Management of Acute Malnutrition programmes has been assessed	Based on information available online, including the Coverage Monitoring Network (http://www.coverage-monitoring.org/)
3.1.7 Fortification of staple foods	Monitoring of staple food fortification	National M&E Framework; Food Fortification Initiative (http://www.ffinetwork.org/)
3.1.7.1 Monitoring system to track USI programme activities	Country-reported data on presence of monitoring system to track universal salt iodization (USI) programme activities	Nutridash 2015 (Unicef)
3.2 Sectoral platforms relevant for nutrition		
3.2.1 Health - HMIS	Health Management Information System established	Country sources (Google search for evidence of HMIS)
3.2.2 Agriculture and Food sector	Agricultural Management Information System established	Country sources (Google search for evidence of AMIS)
3.2.2.1 Early Warning system	Early Warning system established	Country sources (Google search for evidence of Early Warning system)
3.2.2.2 Food markets	Government institution that monitors food prices	Data sources listed by FAOSTAT for food price monitoring http://www.fao.org/gIEWS/food-prices/data-partners/en/
3.2.3 Education sector	Education Management Information System established	Country sources (internet search for evidence of EMIS); World Bank projects with EMIS components http://datatopics.worldbank.org/education/files/EducationProjects/EmisActivityList.xlsx
3.2.4 Water, Sanitation and Hygiene (WASH) sector	Existence of a national information system for drinking-water or sanitation (data available for decision-making in at least one of the component areas)	WHO (2014) UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) 2014 report: Investing in water and sanitation: Increasing access, reducing inequalities. http://apps.who.int/iris/handle/10665/139735
	GLAAS scoring: 0=Only limited data collected and limited availability 0.2=Partial data available, but not generally used 0.7=Data available and analyzed through a management information system and used for a minority of decisions 1.0=Data available and analyzed through a management information system and used for a majority of decisions	Country sources (internet search for evidence of WASH MIS)
3.2.4.1.1 Data for public health priority setting to reduce WASH related disease	Country score for level of data availability and use: Question B4a - Are data collected and used in the health sector to identify public health priorities for reducing WASH related diseases?	WHO GLAAS 2014 country survey database
3.2.4.1.2 Data for health sector response to WASH-related disease outbreaks	Country score for level of data availability and use: Question B4b. Are data collected and used in the health sector to respond to WASH related disease outbreaks?	WHO GLAAS 2014 country survey database
3.2.4.2.1 Sanitation data for policy & strategy decision-making	Country score for level of data availability and use: Question B4c - Are data collected and used for decision-making for sanitation policy and strategy?	WHO GLAAS 2014 country survey database

INDICATOR	DEFINITION	SOURCE
3.2.4.2.2 Sanitation data for resource allocation decision-making	Country score for level of data availability and use: Question B4d. Are data collected and used for decision-making for sanitation resource allocation?	WHO GLAAS 2014 country survey database
3.2.4.3.1 Drinking water data for policy & strategy decision-making	Country score for level of data availability and use: Question B4e - Are data collected and used for decision-making for drinking-water policy and strategy?	WHO GLAAS 2014 country survey database
3.2.4.3.2 Drinking water data for national standards decision-making	Country score for level of data availability and use: Question B4f. Are data collected and used for decision-making for drinking-water national standards?	WHO GLAAS 2014 country survey database
3.2.4.3.3 Drinking water data availability for resource allocation decision-making	Country score for level of data availability and use: Question B4g. Are data collected and used for decision-making for drinking-water resource allocation?	WHO GLAAS 2014 country survey database
3.2.5 Safety Net Programs	Availability of data on safety net programme access, coverage or other relevant information	<p>Monchuk, Victoria. 2013. Reducing Poverty and Investing in People: The New Role of Safety Nets in Africa. Directions in Development. Washington, DC: World Bank.</p> <p>Asian Development Bank (2012) Country Reports related to Updating and Improving the Social Protection Index</p> <p>Country sources (internet search for information on country monitoring systems)</p>
3.2.6 Early Childhood Development	Availability of data at the national level on ECD programme access, coverage, child outcomes or other relevant information	<p>SABER-Early Childhood Development Ratings, including specific assessment of data availability (both administrative and survey data) and systems to monitor ECD outcomes.</p> <p>Country reports available for 17 SUN countries: Burkina Faso (2014), DRC (2014), Gambia (2013), Guinea (2013), Indonesia (2015), Kyrgyz Republic (2013), Liberia (2012), Malawi (2015), Mali (2013), Nepal (2013), Nigeria (2013), Sierra Leone (2013), Tajikistan (2013), Tanzania (2012), Togo (2013), Uganda (2012), Yemen (2010)</p>

REFERENCES

- ACF (2015). SMART 2015 Year in Review. Toronto, Canada: ACF Canada. <http://smartmethodology.org/wp-content/uploads/2016/05/SMART-2015Review-WEB.pdf>
- ACF (2016). SMART Global Assessment Working Group 2016 Meeting Report. Nairobi, Kenya May 25-26, 2016. Toronto, Canada: ACF Canada. <http://smartmethodology.org/wp-content/uploads/2016/08/SMART-2016-Global-AWG-Meeting-Report.pdf>
- Asian Development Bank (2015). Updating and Improving the Social Protection Index: Technical Assistance Completion Report. <https://www.adb.org/sites/default/files/project-document/159906/44152-012-tcr.pdf> [accessed 10 December 2016]
- Black, R. et al. (2013). Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet*, 382(9890), 427-51. doi:[http://dx.doi.org/10.1016/S0140-6736\(13\)60937-X](http://dx.doi.org/10.1016/S0140-6736(13)60937-X)
- DHS Program (2016). Nutrition. <http://dhsprogram.com/Topics/Nutrition.cfm>
- FAO (2015). Information Systems for Food Security and Nutrition.
- FAO (2005). 'Nutrition indicators for development' <http://www.fao.org/docrep/008/y5773e/y5773e00.htm#Contents>
- Gillespie, S., Haddad, L., Mannar, V., Menon, P., Nisbett, N., & the Maternal and Child Nutrition Study Group (2013). The politics of reducing malnutrition: building commitment and accelerating progress. *Lancet*, Maternal and Child Health series, Paper 4.
- Hancioglu, A. & Arnold, F. (2013). Measuring coverage in MNCH: tracking progress in health for women and children using DHS and MICS household surveys. *PLOS Medicine*, 10(5): e1001391. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3646216/pdf/pmed.1001391.pdf>
- Kim, D. (2016). Mapping Exercise: Global Data and Accountability Initiatives for Nutrition.
- Lamstein, S., Pomeroy-Stevens, A., Webb, P., & Kennedy, E. (2016). Optimizing the multisectoral nutrition policy cycle: a systems perspective. *Food & Nutrition Bulletin*, 37(4S):S107-S114.
- Luthringer, C.L., Rowe, L.A., Vossenaar, M. & Garrett, G.S. (2015). Regulatory Monitoring of Fortified Foods: Identifying Barriers and Good Practices. *Global Health: Science and Practice*, 3(3):446-461.
- Monchuk, V. (2014). Reducing Poverty and Investing in People: The New Role of Safety Nets in Africa. Washington DC: World Bank.
- Scaling Up Nutrition (2014a). "SUN in Practice: Information Systems for Nutrition". Geneva.
- Scaling Up Nutrition (2014b). "SUN in Practice: Effectively Engaging Multiple Stakeholders". Geneva.
- Tuffrey, V. (2016). Nutrition surveillance systems: their use and value. London: Save the Children and Transform Nutrition.
- Tuffrey, V., and Hall, A. (2016). Methods in nutrition surveillance in low-income countries. *Emerging Themes in Epidemiology* 13:4.
- UNICEF (2013). MICS5 Indicators: Numerators and Denominators.
- UNICEF (2014). Nutridash 2013: Global report on the pilot year. New York.
- UNICEF (2016). NutriDash 2015 database. New York.
- WFP (2016). Assessment Types. <https://www.wfp.org/food-security/assessments>
- WHO (n.d.) UN-Water Global Analysis and Assessment of Sanitation and Drinking-water (GLAAS). http://www.who.int/water_sanitation_health/monitoring/investments/glaas/en/ [accessed 10 December 2016]
- WHO (2013a). Essential nutrition actions: improving maternal, newborn, infant and young child health and nutrition. Geneva: World Health Organization.
- WHO (2013b). Global nutrition policy review: what does it take to scale up nutrition action? Geneva: World Health Organization.
- WHO (2014a). Comprehensive implementation plan on maternal, infant and young child nutrition. Geneva: World Health Organization.
- WHO (2014b). Indicators for the Global Monitoring Framework on Maternal, Infant and Young Child Nutrition. Geneva: World Health Organization.
- World Bank (2013). What matters most for early childhood development: a framework paper. SABER Working Paper Series, No. 5. Washington DC: World Bank. http://wbfiles.worldbank.org/documents/hdn/ed/saber/supporting_doc/Background/ECD/Framework_SABER_ECD.pdf [Accessed 10 December 2016]
- World Bank (2016). Indicators. <http://data.worldbank.org/indicator>