NiPN-Ethiopia
National Information Platform for Nutrition

Ethiopian Public Health Institute

Nutrition Data Mapping for Ethiopia: Assessment of the Availability and Accessibility of Nutrition-Related Data

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List of Acronyms

AGP	Agricultural Growth Program
ANC	Antenatal Care
BCC	Behavior Change Communication
BFHI	Baby Friendly Hospital Initiative
BMI	Body Mass Index
CSA	Central Statistics Agency
DHIS2	District Health Information System 2
EDHS	Ethiopia Demographic and Health Survey
EMDHS	Ethiopia Mini Demographic and Health Survey
EMIS	Education Management Information System
EPHI	Ethiopian Public Health Institute
EU	European Union
FAO	Food and Agriculture Organization
FNP	Food and Nutrition Policy
FTC	Farmers Training Center
GMP	Growth Monitoring and Promotion
HIV	Human Immunodeficiency Virus
HCES	Household Consumption and Expenditure Survey
HMIS	Health Management Information System
IFA	Iron and Folic Acid
IFPRI	International Food Policy Research Institute
IYCF	Infant and Young Child Feeding
IYCN	Infant and Young Child Nutrition
LBW	Low Birth Weight
ILO	International Labor Organization
LQAS	Lot Quality Assurance Sampling
MAD	Minimum Acceptable Diet
MDD	Minimum Dietary Diversity
MIYCN	Maternal Infant and Young Child Nutrition
MMF	Minimum Meal Frequency
MOA	Ministry of Agriculture
MOE	Ministry of Education
MOH	Ministry of Health
NACS	Nutrition, Assessment, Counseling and Support
NIPN	National Information Platforms for Nutrition
NNP	National Nutrition Program
NSA	Nutrition Sensitive Agriculture
PLHIV	People Living with HIV
PLW	Pregnant and Lactating Women
PSI	Policy Studies Institute
PSNP	Productive Safety Net Program
RCT	Randomized Controlled Trials
SAM	Severe Acute Malnutrition

SNNPR	Southern Nations, Nationalities and People's Region
SO	Strategic Objective
SSI	Small Scale Irrigation
SUN	Scaling Up Nutrition
TB	Tuberculosis
UNISE	Unified Nutrition Information System in Ethiopia
WASH	Water, Sanitation and Hygiene
WASHCO	Water, Sanitation and Hygiene Committee
WFP	World Food Program
WHA	World Health Assembly
WHO	World Health Organization

Glossary of Terms

Data sources. A data source is the location or origin of data that is being used. It can take a variety of forms, such as databases, files, datasets, or reports, that can be accessed and used. In this report data sources refer to data from surveys or routine monitoring systems.

Dataset. A dataset is a structured collection of data, including variables and values. In this report datasets contain data on specific indicators from surveys or that are generated from routine monitoring information systems.

Data availability. In this report data availability refers to the existence of data for indicators included in the nutrition data mapping.

Data accessibility. Data accessibility refers to the ability to obtain data that is stored within a database or another repository, either through open access or upon request.

Information systems. Routine information systems are systems that provide information at regular intervals to meet information needs. They are used to generate, process, and report routine data and to track progress over time.

Open access. Open access data is free and publicly available for anyone to use without any restrictions.

Routine monitoring data. This is administrative data generated by frontline service providers that are included in an information system.

Level of representativeness. This refers to a data source that contains information about a population that reflects the characteristics of the larger group in a geographic location.

Executive Summary

For the last two decades in Ethiopia, ending malnutrition has been a national government priority. The government of Ethiopia recognizes that high quality and timely data are needed to identify the magnitude of malnutrition and to assess the impact of evidence-based interventions. To contribute to these efforts, the Ethiopian National Information Platform for Nutrition (NIPN), hosted by the Ethiopian Public Health Institute, supports evidence-based decision making through the analysis of existing data and communicating the findings to policy and decision makers. Identifying existing nutrition data sources and determining their accessibility for further analysis and decision making, are NIPN priorities.

Through this nutrition data mapping, we aimed to provide an overview of the availability, accessibility, and quality of nutrition-related data for selected indicators among multisectoral nutrition actors in Ethiopia. We contacted 29 nutrition stakeholders and assessed the availability and accessibility of data for 70 priority nutrition indicators. These indicators were drawn from national policy and program documents and global nutrition monitoring frameworks.

Our key findings and recommendations are summarized below.

Key Findings

- We identified a total of 62 data sources.
- The main types of data sources were surveys (87%), randomized controlled trials and longitudinal follow-up studies (8%), and routine monitoring information systems (5%).
- Data were available to track progress for five of the six World Health Assembly targets (low birth weight being the exception). Limited data were available to adequately track progress at the regional and sub-regional levels.
- Adolescents and women of reproductive age were the two target groups with the least amount of data available.
- While few of the data sources identified were open access (18%), most of the remaining sources were accessible upon request (73%).
- At the time of this nutrition data mapping, only two NNP-II implementing ministries had information systems that collect, analyze and use routine monitoring data. However, only a limited number of nutrition indicators were included in these systems; eight in the Health Management Information System (HMIS) and none in the Education Management Information System (EMIS). Additionally, the Unified Nutrition Information System in Ethiopia (UNISE) was not yet implemented at national scale.
- Data availability for indicators showed that data for infant and young child feeding (IYCF) indicators were collected the most, and among nutrition-sensitive intervention indicators, water, sanitation and hygiene (WASH) indicators had the most data.
- Limited data were available to assess the coverage of nutrition-sensitive interventions, beyond WASH.

Recommendations

- Future surveys and impact evaluations need to focus on filling identified data gaps for priority indicators. More data are needed for specific target groups such as adolescents, for

indicators such as women's diets, and for information on the coverage of nutrition-sensitive interventions.

- Routine monitoring information systems need to be strengthened and expanded. Routine monitoring data can provide useful information on the coverage of nutrition-sensitive and nutrition-specific interventions. As such, more nutrition indicators need to be included in existing information systems such as the HMIS, the implementation of the UNISE need to be scaled up nationally, and information systems need to be established in all sectors that implement nutrition-sensitive interventions.
- Central data repository systems need to be established to facilitate data use and allow for easy access to data.
- The use of the best data sources for specific information needs should be promoted to enhance evidence-based decision making.
- Nutrition data mapping need to be conducted periodically as new data and information become available.

1. Background

Good nutrition is a vital part of health and development. Its benefits are multiple and can optimize infant, child and maternal health, ensure safer pregnancy and childbirth, improve immune systems, lower the risk of non-communicable diseases, and lead to longevity and better learning outcomes[1]. As the consequences of malnutrition are dire, ending malnutrition in all its forms, has become a global development objective[2]. The 2012 World Health Assembly (WHA) identified six global targets related to the reduction of stunting, anemia, low birth weight, and childhood obesity, to be achieved by 2025. These targets were also adopted by the Sustainable Development Goals[3].

To sustain this commitment, countries need to track their progress in reducing malnutrition and establish accountability mechanisms, which rely on high-quality and timely data generated through routine monitoring systems, surveys, and research studies. Data are needed to identify the magnitude of malnutrition and to assess the impact of evidence-based interventions[3]. However, several factors hamper national efforts to evaluate progress, show the effectiveness of interventions, and increase investment to end malnutrition. These include, among others, weak or non-existent information systems, unreliable data quality, and gaps in data on nutritional outcomes and the coverage of nutrition interventions[4]. Using existing data and highlighting data gaps for future studies are ways through which these data gaps can be filled[4].

Despite significant improvements over the last two decades, malnutrition is still a public health concern in Ethiopia[5]. Recognizing the importance of good nutrition, the Government of Ethiopia has made nutrition a national priority. In 2013, it launched the National Nutrition Program, which in 2016, entered its second phase (NNP-II)[6]. The NNP-II is a multisectoral program with 13 sectors aligned behind its objectives. It includes nutrition-specific and nutrition-sensitive interventions aimed at accelerating progress in the reduction of malnutrition across sectors. Ethiopia has also launched additional strategies and programs to ensure food and nutrition security. Some of these include the Seqota Declaration (the national flagship program which aims to reduce stunting in children under two years of age by 2030)[7], the Nutrition-Sensitive Agriculture Strategy[8], the ONE WASH National Program[9], and the Productive Safety Net Program[10]. However, the absence of an accountability system for implementing sectors has hampered the country's attainment of food and nutrition security. To address this shortcoming, in 2018, Ethiopia launched its first Food and Nutrition Policy (FNP)[11], which provides a policy foundation for multisectoral collaboration and an overarching framework covering the key dimensions of food and nutrition security. Currently, Ethiopia is developing the National Food and Nutrition Strategy to operationalize the policy.

The NIPN in Ethiopia is part of a global initiative, funded by the EU, with support from the Foreign, Commonwealth, and Development Office and the Bill and Melinda Gates Foundation. It aims to support evidence-based decision making through the analysis of existing data and communicating the findings to policy and decision makers and the broader nutrition community. For the NIPN, all the NNP-II/FNP stakeholders and decision makers are both the sources of data and the beneficiaries of NIPN research outputs which inform their policies and programs. Since the NIPN relies on secondary data sources to inform evidence-based decision making, the identification of these data sources, as well as determining their availability and accessibility, are NIPN priorities.

2. Objectives of the Nutrition Data Mapping

The main objective of this nutrition data mapping was to provide an overview of the availability, accessibility, and quality of nutrition-related data for selected indicators among multisectoral nutrition actors in Ethiopia. The specific objectives included:

- To assess the availability of data for selected nutrition-specific and nutrition-sensitive indicators.
- To assess the accessibility and quality of data sources identified during the data mapping.
- To describe the existing information systems among NNP-II signatory ministries and nutrition-related indicators included in these systems.

3. Data Mapping Approach

We followed a process to identify priority nutrition data sources and nutrition-sensitive and nutrition-specific indicators to be included in the nutrition data mapping. We held consultations with key nutrition experts and reviewed multisectoral nutrition policy, strategy, and program documents as well as global nutrition monitoring resources. These included, among others, the NNP-II[6], the National Nutrition-Sensitive Agriculture Strategy[8], the Productive Safety Net Program (PSNP) 4[10], the One WASH National Program Phase II[9], the Global Nutrition Monitoring Framework[3], and the Scaling Up Nutrition (SUN) Monitoring Evaluation Accountability and Learning system[12]. Thereafter, we listed priority stakeholders and indicators. The NNP-II signatory ministries as well as institutions that mainly collect nationally and regionally representative data were prioritized. In addition, a number of other institutions were contacted for the nutrition data mapping which included United Nations agencies, non-governmental organizations, and academic institutions (see Annex I).

3.1. Stakeholder Interviews

From December 2019 to February 2020, we contacted 29 stakeholders for interviews. During the initial contact with stakeholders, the purpose of the data mapping was explained and the data sources to be included in the assessment were identified. Subsequent interviews were conducted to gather information on data sources. Several interviews with each stakeholder were conducted to capture the required information. Data were collected using a semi-structured questionnaire with two sections; the first section collected general information and the second collected information on each of the data sources. Information collected included the level of representativeness of the available data, target groups, accessibility of the identified data sources, data quality assurance steps taken during data collection, the existence of national information systems, and the NNP-II performance indicators included in these systems.

3.2. Document Review

During the interviews, we collected reports from stakeholders which were produced using specific data sources, when available. This step was necessary because some stakeholders were not familiar with the details of the data sources, and in some cases, the data sources were not stored with the stakeholders but were with consultants. We reviewed reports and questionnaires to extract additional information and to complement the information provided by the stakeholders.

3.3. Description of Indicators

A total of 70 indicators were identified (see Annex II) and divided into the following four broad categories.

Nutrition and health indicators. These mainly included nutrition-specific impact indicators and indicators related to basic and immediate determinants of malnutrition. These were indicators that assess anthropometric status, diet, food security, IYCF, and nutrition-specific and nutrition-sensitive intervention coverage.

Nutrition-sensitive agriculture indicators. These consist of indicators included in the 2016 Nutrition-Sensitive Agriculture (NSA) Strategy and selected nutrition-sensitive agriculture indicators drawn from the NNP-II. They provided information on crop, fruit, and vegetable yield, production diversity, meat, milk, eggs, homestead, and poultry production, bio-fortified crop production, food processing, and food price data.

Safety net (Social Protection) indicators. These indicators focused on the coverage of the PSNP and Urban Safety Net Programs, household food security, and the nutritional status of children of safety net program beneficiaries.

WASH indicators. This category included indicators that assess household and school access to improved latrine facilities, improved drinking water supply, hand washing facilities, proportion of households practicing open defecation, and the proportion of households with animal cohabitation.

3.4. Data Management

The data collected were entered into an Excel spreadsheet. Data management and analysis were conducted in Stata Version 16.0.

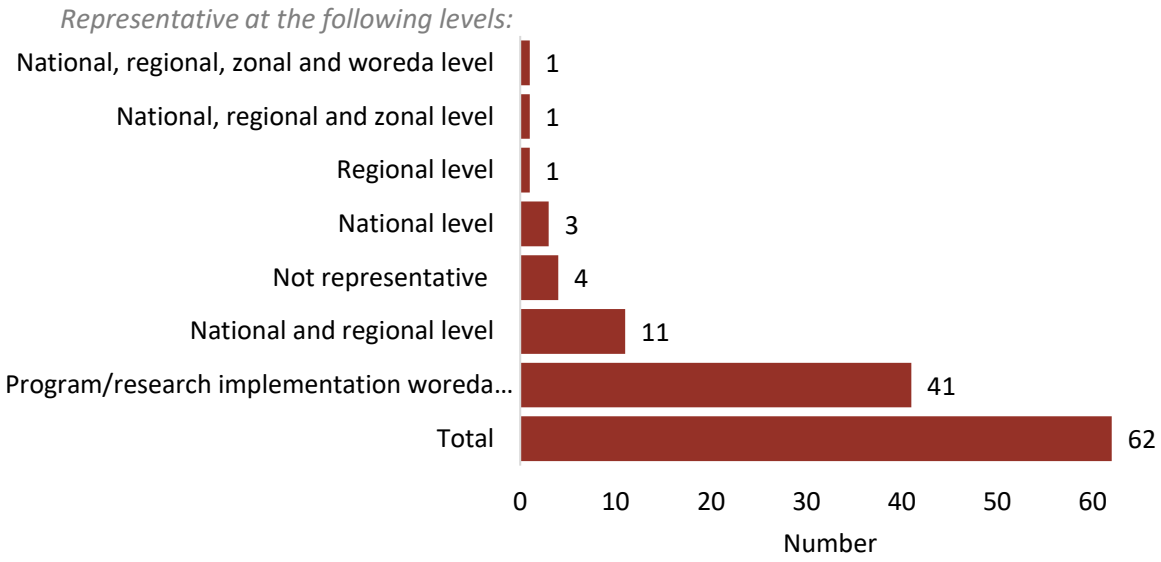
4. Findings from the Nutrition Data Mapping

We contacted 29 stakeholders for interviews and identified a total of 62 data sources (see Annex III). The response rate for the interviews was 83%.

4.1 Type of Data Sources and Level of Representativeness

The types of data sources identified were surveys (87%), randomized controlled trials and longitudinal follow-up studies (8%), and routine monitoring information systems (5%). Figure 1 provides the level of representativeness of the 62 data sources. The majority (n=41, 66%) of the data sources identified were only representative at the project or study implementation areas. Less than a fifth (n=11, 18%) of the data sources were nationally and regionally representative. Most of these data sources were population-based household surveys designed to be representative of the population. The Crop and Livestock Product Utilization Survey conducted by the Central Statistics Agency (CSA) was the only data source that contained data that were representative up to the zonal level. The HMIS, a routine monitoring information system, provided national, regional, zonal, and woreda level data which were representative of the individuals using health services (not population-based).

Figure 1. Level of representativeness of data sources

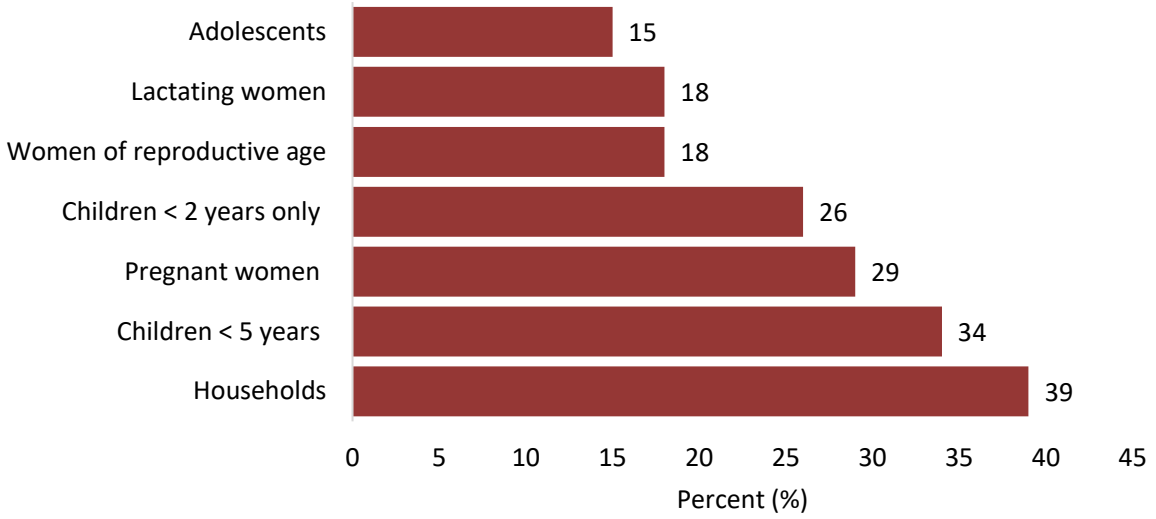


4.2 Target Groups and Regions Across Data Sources

Both the NNP-II and the FNP adopt a life-cycle approach to address malnutrition. The availability of data across the lifecycle is therefore important to identify priority target groups and to target interventions. Figure 2 shows the availability of data for different target groups across data sources identified in the nutrition data mapping. Almost forty percent of the data sources contained nutrition-related data for households (39%) and for children under five years of age (36%). A fourth or more of the data sources had data for pregnant women (29%) and for children under two years of age (26%). Adolescents were the least represented target group across the data sources (15%). From

the regions in Ethiopia, Amhara (79%), Oromia (76%), Southern Nations, Nationalities and People's Region (SNNPR) (73%) and Tigray (61%) were the most represented across data sources.

Figure 2. Availability of data for different target groups



4.3 Data Quality Measures

Evidence-based decision making relies on the generation of high-quality data. It is therefore critical to assure and maintain the quality of the data used to inform policies and programs. For the nutrition data mapping, we assessed data quality measures commonly used among stakeholders when collecting and compiling nutrition data (Table 1). Most of the stakeholders (95%) reported having a predefined sampling methodology, and 60% were making use of a data supervision checklist when monitoring the quality of the data.

Table 1. Commonly used data quality control measures

Data quality measures	%
Predefined sampling methodology	95
Training of survey team	86
Pre-test/pilot	88
Data supervision checklist	60
Use of data entry program	72
Double entry	28

4.4 Data Accessibility

Data are continually being generated through surveys, routine monitoring systems and research studies. To use these data and to facilitate evidence-based decision making, they must be accessible to others. Open access data is publicly available for anyone to use and distribute without any restrictions[13]. However, only 18% (11 out of 62) of the data sources identified were open access. Of the data sources that were not open access, most were accessible upon request (73%) and 27% were not accessible. The main reasons mentioned for data not being accessible included that the results

were not published yet, uncertainties about data ownership, and that data were not kept with the user. Data sources were mainly used by the data owners (84%) but research institutions (68%), stakeholders (54%), donors (51%), and universities (39%), also had access to these data sources.

4.5 Description of Nutrition Information Systems

Information systems are used to generate, process, and report routine monitoring data. These systems are designed to help monitor implementation, measure progress over time, and to create data summaries to assist with planning and decision making[14]. Among the seven NNP-II implementing ministries contacted for this assessment, only the Ministry of Health (MOH) and the Ministry of Education (MOE) had routine monitoring information systems. The existing information systems are described below.

4.5.1 The Health Management Information System (HMIS)

The MOH uses the HMIS to generate routine monitoring data at all levels of the health system. The HMIS uses the District Health Information System 2 (DHIS2) platform to aggregate and visualize the data. The HMIS data is initially collected at the health posts and flows to the health centers, woreda, zonal, and regional health bureaus. Aggregate reports are produced at the national level on a monthly, quarterly, and annual basis[15,16]. The HMIS uses Lot Quality Assurance Sampling (LQAS) across reporting structures to assure data quality[17]. The HMIS has a total of 131 core indicators of which eight are nutrition indicators (Table 2)[18]. Additional nutrition-specific indicators are also included in the HMIS such as antenatal care (ANC) coverage, full immunizations, and teen pregnancy.

Table 2. Nutrition indicators included in the HMIS

Indicators
Percentage of low birth weight (LBW) newborns
Proportion of children under two years of age who participated in growth monitoring and promotion
Proportion of children under five years screened for acute malnutrition
Treatment outcomes for management of severe acute malnutrition in children under five years
Proportion of children aged 6-59 months who received vitamin A supplementation
Proportion of children 24-59 months who were dewormed
Proportion of pregnant and lactating women (PLW) screened for acute malnutrition
Proportion of pregnant women who received iron and folic acid supplements at least 90 plus days

4.5.2 The Unified Nutrition Information System in Ethiopia (UNISE)

The UNISE is used to collect nutrition-sensitive data from multisectoral nutrition actors to supplement the nutrition data collected through the HMIS[7]. The Seqota Declaration is currently implementing the UNISE in eight implementation woredas in Tigray and Amhara regions. Data for UNISE indicators are currently collected from seven NNP-II signatory ministries (Health, Agriculture, Education, Water, Irrigation and Energy, Social and Labor Affairs, Women and Children Affairs and Transport). Data are reported through UNISE on a monthly, quarterly, bi-annual, and annual basis. The list of UNISE indicators is included in Annex IV.

4.5.3 The Education Management Information System (EMIS)

The MOE's EMIS system captures educational data which are reported on a bi-annual basis. No nutrition-related indicators are included in this system.

4.6 Data Availability for Indicators

The availability of data for priority indicators is critical to monitor implementation and to assess the impact of nutrition strategies and programs. These indicators also facilitate the country to track progress against global and national targets, identify priority areas for action, and to facilitate evidence-based decision making. We assessed the availability of data for 70 indicators during this nutrition data mapping. Table 2 shows the availability of data for these indicators.

From all the indicator categories, data for IYCF indicators were collected the most across the data sources, followed by anthropometric indicators. From the nutrition-sensitive indicators, data for WASH indicators were collected the most. The health sector produced more data than other sectors on the coverage of nutrition-sensitive and nutrition-specific interventions. Limited data were available for safety net indicators.

Among the anthropometric indicators, stunting, underweight and wasting data were collected the most. Stunting and wasting are included in the WHA targets and are NNP-II impact indicators. This likely contributed to higher data availability for these indicators. Fewer data sources contained data on the anthropometric status of women (Body Mass Index [BMI]) compared to children. Data for low birth weight was captured the least. In the Ethiopia Demographic and Health Survey (EDHS) the quality of data for this indicator is poor as birth weight is assessed subjectively (rather than through measurements).

Data for diet diversity and household food insecurity indicators, were collected the most in the diet and food security group.

From all the IYCF indicators, data for the Minimum Diet Diversity (MDD) indicator was the most widely collected across all data sources including in other sectors beyond the health sector. For example, MDD is a target in the Agricultural Growth Program (AGP)[19] and PSNP 4[20] and was thus measured as an outcome indicator in evaluations of both these programs. Almost half of all the data sources contained data on exclusive breastfeeding and on Minimum Acceptable Diet (MAD) (which is a composite indicator of MDD and Minimum Meal Frequency [MMF]). Data for the coverage of IYCF promotion programs were collected the least among the IYCF indicators.

Among the nutrition-specific and nutrition-sensitive interventions, at least a quarter of the data sources included data for vitamin A supplementation, iron/folate supplementation during pregnancy, deworming, and four or more ANC visits during pregnancy. Provision of school feeding was captured the least.

For the agricultural indicators, data for fruits and vegetable yield were collected the most. Household production diversity was included in a third of the data sources, and it was the NSA indicator which was collected the most by other sectors. The introduction of food preservation and improved varieties indicators were collected the least.

Data for WASH indicators were collected the most among the nutrition-sensitive intervention indicators. Just under half of the data sources included information on improved drinking water, sanitation, and the availability of hygiene facilities. Data on access to improved water and sanitation facilities in schools were collected the least.

Few data sources (≤15%) contained data on safety net indicators. Data on the coverage of PSNP was collected the most among indicators in the safety net category.

Table 3. Data availability for selected indicators across data sources

Indicator	n (%)
Anthropometric indicators	
Prevalence of stunting among children under five	27 (44)
Prevalence of underweight among children under five	28 (45)
Prevalence of wasting among children under five	26 (42)
Low birth weight among children under five	5 (8)
Low Body Mass Index (BMI) among women	16 (26)
Child overweight/obesity	21 (34)
Women overweight/obesity	18 (29)
Reduction in % of stunting in children under 5 in operational areas	5 (8)
Diet and food security indicators	
Household diet diversity	17 (27)
Individual diet diversity	20 (32)
Household food insecurity	21 (34)
Minimum Diet Diversity-Women (MDD-W)	13 (21)
Food price	6 (10)
Biochemical indicators	
Anemia in children 6-59 months	6 (10)
Anemia in women of reproductive age	5 (8)
IYCF indicators	
Minimum Diet Diversity (MDD)	35 (56)
Minimum Meal Frequency (MMF)	27 (44)
Minimum Acceptable Diet (MAD)	28 (45)
Exclusive breastfeeding of infants 0-6 months	29 (47)
Initiation of breastfeeding	26 (42)
Number of children breastfed for two years or beyond	28 (45)
Introduction of optimal complementary feeding at 6 months	27 (44)
Coverage of IYCF promotion	7 (11)
Nutrition-specific and nutrition-sensitive interventions	
Vitamin A supplementation	17 (27)
Iron/folate supplements during pregnancy	16 (26)
Deworming coverage	15 (24)
Four or more ANC visits	15 (24)
Coverage of salt iodization	10 (16)
Coverage of Oral Rehydration Salt treatment	10(16)
Severe acute malnutrition (SAM) treatment coverage	4 (6)
DTP3 immunization	4 (6)
Iron/folate supplements for adolescents	6 (10)
Proportion of schools with school feeding program	1 (2)
Nutrition-sensitive agriculture indicators	

Household production diversity	21 (34)
Yield per crop	12 (19)
Amount of fruits and vegetables produced	25 (40)
Proportion of households with home gardens	15 (24)
Amount of nutrient dense staple crops and pulses produced	17 (27)
Amount of meat produced	10 (16)
Amount of milk produced	11 (18)
Number of eggs produced	12 (19)
Number of hectares under irrigation	15 (24)
Proportion of households with caged/fenced poultry production	3 (5)
Proportion of woredas with at least one milk collection center supported	6 (10)
Number of nutrient dense improved varieties disseminated	2 (3)
Number of food processing technologies or practices identified and introduced	3 (5)
Number of fruit and vegetable preservation technologies introduced	1 (2)
Number of fish preservation technologies identified and introduced	--
Number of bio-fortified crops promoted	5 (8)
Amount of crop lost at pre- and post-harvest	12 (19)
Fruits and vegetables loss	15 (24)
WASH indicators	
Access to improved drinking water	29 (47)
Access to improved sanitation facilities	27 (44)
Availability of hand washing facilities	25 (40)
Schools with improved water supply	11 (18)
Proportion of households practicing open defecation	23 (37)
Proportion of households that practice safe disposal of child feces	18 (29)
Proportion of households with animal cohabitation	9 (15)
Safety net indicators	
Coverage of Productive Safety Net Program	9(15)
Coverage of Urban Safety Net Program	4 (6)
Safety net clients benefiting from nutrition-related conditionality	4 (6)
Health and other indicators	
Prevalence of malaria	9 (15)
Prevalence of diarrhea	21 (34)
Prevalence of pneumonia	9 (15)
Proportion of health services with essential medicines available	--
Coverage of use of insecticide treated mosquito nets	1 (2)
National budget per child U5 for nutrition-specific interventions	--
Proportion of nutrition budget for treatment of SAM	--
Proportion of population below poverty line	7 (11)
Proportion of expenditures allocated for food	4 (7)

4.7. Comparison of Indicator Definitions Across Data Sources

As mentioned earlier, most the NNP-II implementing ministries do not have routine monitoring information systems. This makes it challenging to assess the consistency in the use of indicator definitions across information systems. However, we compared indicator definitions in both the HMIS and EDHS and found different definitions for some indicators (Table 4). For instance, to determine vitamin A supplementation coverage, the HMIS assesses intake of two doses of vitamin A, while the EDHS does not define the number of doses (a single-dose taken in the past six months will

count towards this indicator). Differences in indicator definitions were also seen for deworming, iron/folate supplementation and ANC visits during pregnancy.

Table 4. Differences in indicator definitions in the HMIS and EDHS

Indicator	HMIS definition	EDHS definition
Vitamin A supplementation	Proportion of children aged 6-59 months who received two doses of vitamin A	Proportion of children 6-59 months who received vitamin A supplements in the six months preceding the survey
Children deworming	Proportion of children aged 24-59 months dewormed twice per year	Proportion children 6-59 months dewormed in the six months preceding the survey
Ninety plus days of iron and folic acid (IFA) supplementation	Proportion of pregnant women who received IFA at least 90 plus days	Proportion of women who took iron tablets for 90+ days during the pregnancy of their last birth
Four or more ANC visits	Proportion of pregnant women who received four or more antenatal care visits	Percentage of women who had a live birth in the five years preceding the survey who had 4+ antenatal care visits

4.8. Tracking Progress in Achieving Global and National NNP-II Targets

4.8.1. Data Gaps to Track Progress in NNP-II targets

The NNP-II was launched in 2016 and provides a framework for coordinated implementation of nutrition interventions. The governing body of the program, the National Nutrition Coordinating Body, is composed of representatives from 13 sectors. The NNP-II has five strategic objectives (Box 1) with indicators for each to measure progress in the implementation and impact of the program (Annex V).

Box 1: NNP-II Strategic Objectives (SOs)

SO 1 Improve the nutritional status of women (15–49 years) and adolescent girls (10–19 years).

SO 2 Improve the nutritional status of children from birth up to 10 years.

SO 3 Improve the delivery of nutrition services for communicable and non-communicable or lifestyle related diseases.

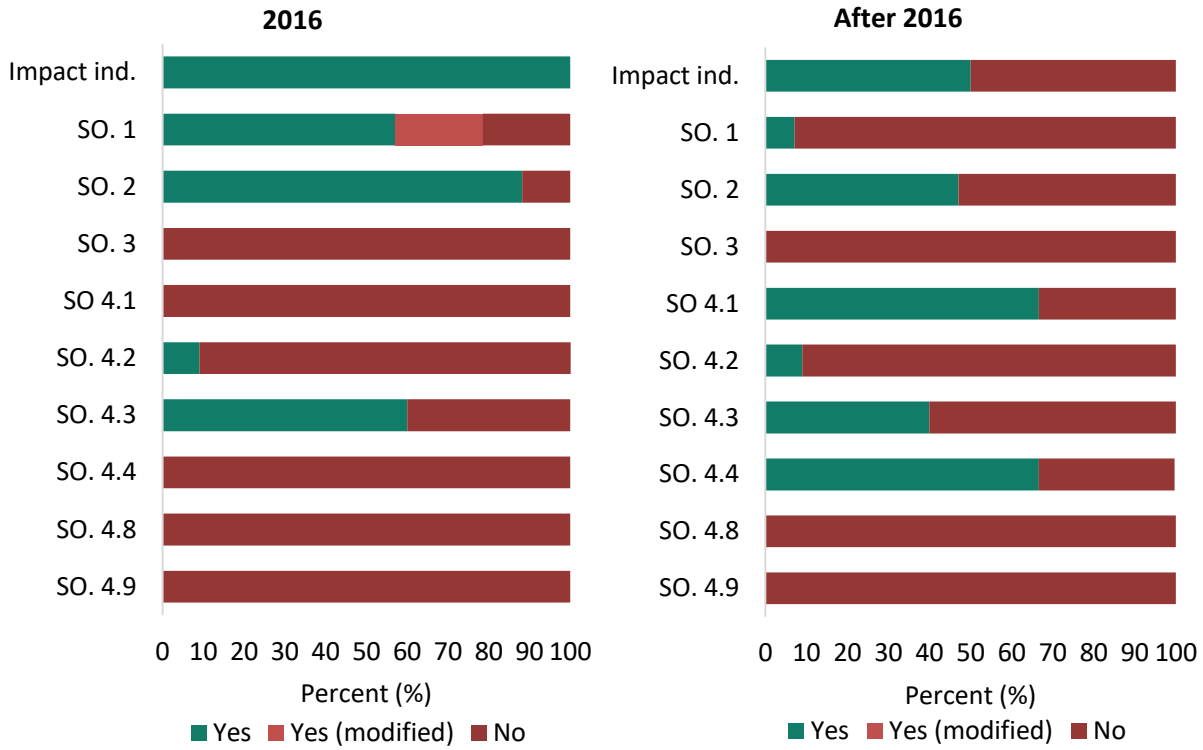
SO 4 Strengthen the implementation of nutrition-sensitive interventions across sectors.

- 4.1. Agriculture
- 4.2. Education
- 4.3. Water, Irrigation and Energy
- 4.4. Industry
- 4.5. Trade
- 4.6. Social Protection
- 4.7. Disaster risk management
- 4.8. Quality and safety of nutrition services and supplies
- 4.9. Nutrition supply management
- 4.10. Nutrition communication
- 4.11. Gender-sensitive nutrition implementation

SO 5 Improve multisectoral coordination and capacity to implement the national nutrition program.

Figure 3 shows the availability of data for indicators that to track the implementation of the first four strategic objectives (including seven results under SO 4) of the NNP-II at baseline (2016) and at any time point after implementation started (after 2016). The green bars (yes) indicate the availability of some data for indicators, while the red bars (no) indicate that data were not available.

Figure 3. Availability of data for NNP-II accountability and result indicators at the start of NNP-II in 2016 and after 2016



The impact indicators included in the NNP-II are anthropometric indicators for women and children. Additionally, five of the six WHA targets are included as impact indicators in the NNP-II. At the start of the program in 2016, data were available to measure progress in all impact indicators using data from the 2016 EDHS. Data from the 2019 Ethiopia Mini Demographic and Health Survey (EMDHS) were used to track progress for child anthropometric status indicators. However, since data for women anthropometric indicators were not collected in the 2019 EMDHS, it was not possible to track progress for this indicator after the NNP-II implementation started.

The first strategic objective (SO 1) of the NNP-II aims to improve the nutritional status of women and adolescents. Data were not available for some adolescent indicators included in the NNP-II (which covers ages 10-19 years). Since the EDHS provides information for some indicators for adolescents aged 15-19 years, these were included in the figure after modification (orange bars).

As shown in the figure, more data were available for SO 2, which aims to improve the nutritional status of children compared to SO 1, although limited data existed to track progress in SO 2 after 2016. Neither population-based survey data nor routine monitoring data were available to track progress in SO 3 (improve the delivery of nutrition services for communicable and noncommunicable diseases).

SO 4 of the NNP-II aims to strengthen the implementation of nutrition-sensitive interventions across sectors. We assessed the availability of data for some of the results under this objective. At the start

of the NNP-II, the Ministry of Agriculture (MOA) did not generate data to track progress in the implementation of SO 4.1. In 2019, the MOA started compiling data from administrative reports to measure progress for some of the indicators under this result. This was also the case for indicators for the industry sector (SO 4.4). For the education sector, despite the EMIS not including any nutrition-sensitive indicators, it did collect data on one of the NNP-II indicators (gender parity index in primary and secondary education), which was included under SO 4.2. For SO 4.3, WASH indicators were included in almost all population-based surveys which made it possible to capture interventions in this sector.

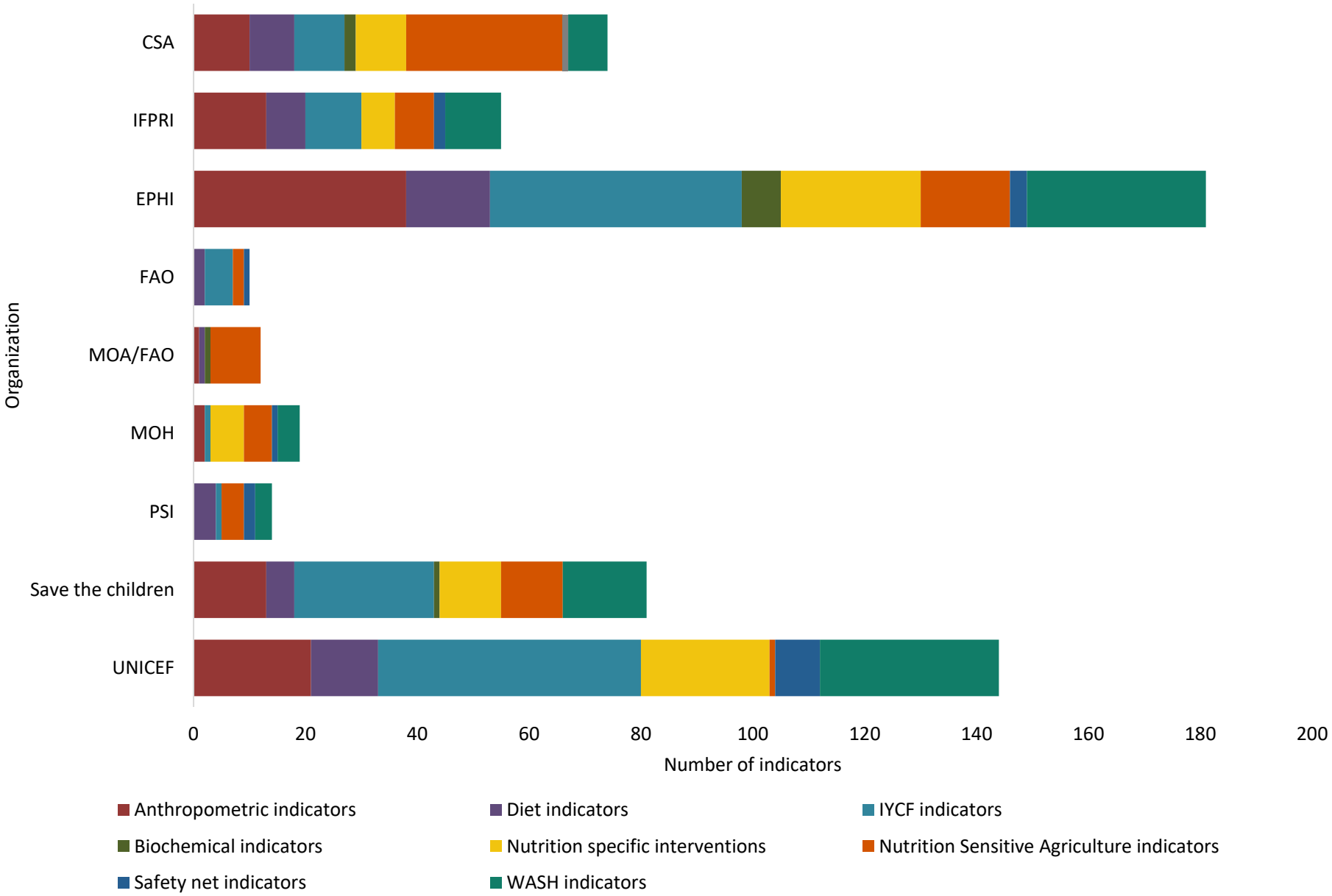
4.8.2. Data Sources to Measure Progress Against Global and NNP-II Targets

The WHA and global nutrition monitoring indicators were included into national programs such as in the NNP-II. To efficiently use the right data to guide decision making, it is important to identify which data sources to use. Annex VI provides information on data sources that provide nationally and regionally representative data to measure progress against NNP-II targets and Annex VII shows the availability of national and sub-national data to track progress against the global nutrition indicators.

As can be gleaned in Annexes VI and VII, the nationally and regionally representative data sources were mainly national population-based surveys (EDHS, EMDHS and the Household Consumption and Expenditure Survey [HCES], smallholder agricultural surveys conducted by the CSA). The HMIS are representative up to woreda level but collects information on service-users and is not population-based. The agricultural surveys are conducted annually whereas the EDHS and HCES are conducted every five years. The EMDHS fills this gap between EDHS surveys, although it has a more limited scope (less indicators than the EDHS). The population-based surveys (most notably the EDHS and the EMDHS), are currently the only nationally representative data sources that track progress for the global nutrition targets. However, they do not provide information for some target populations (such as for adolescents and school children) and do not contain exhaustive information on the coverage of NNP-II priority interventions. The HMIS on the other hand, contains routine monitoring data on the coverage of interventions not included in the EDHS, such as growth monitoring and promotion and malnutrition screening for pregnant and lactating women. However, as it is representative of service users and cannot be used to make generalizations about the population for assessment of impact and data quality steps are less rigorous than the larger surveys.

Additionally, Figure 4 shows data sources from selected stakeholders for indicators included in the nutrition data mapping. The wider each color bar in the graph, the more data were available. Data for anthropometric indicators were available in most data sources with the CSA and EPHI collecting nationally representative data. Diet-related indicators were included in most of the data sources. EPHI and UNICEF held the largest amount of data for WASH indicators and the CSA for nutrition-sensitive agriculture indicators.

Figure 4. Availability of data sources from stakeholders for selected indicators



5. Conclusions and Operational Recommendations

5.1 Summary of the Findings

This nutrition data mapping aimed to provide an overview of the availability and accessibility of nutrition-related data in Ethiopia. We identified a total of 62 data sources. These sources consisted of surveys (87%), randomized controlled trials and longitudinal follow-up studies (8%), and routine monitoring information systems (5%). A few of the data sources identified were open source (18%), while, from those that were not open sources, most were accessible upon request (73%). Less than a fifth (18%) of the data sources provided nationally and regionally representative data. Most data sources (66%) contained data that was representative at the project or implementation woreda level. In terms of data availability among specific target groups, data for children under five years of age were collected the most (34%) across the data sources and for adolescents (15%) the least. At the time of the nutrition data mapping, only two NNP-II implementing ministries have routine monitoring information systems. However, only a limited number of nutrition indicators are included in these systems (eight nutrition indicators in the HMIS, none in the EMIS). Although UNISE collects routine data for additional indicators not included in HMIS, it is not yet implemented at scale (only in selected woredas in two regions). The availability of data for indicators across all data sources showed that IYCF indicators were collected the most. WASH indicators were collected the most among the nutrition-sensitive intervention indicators. The EDHS is the most reliable nationally representative data source to measure progress against global and NNP-II targets. Data were available to track progress for five of the six WHA targets (low birth weight being the exception).

5.2 Conclusions and Recommendations

Based on the findings, the following conclusions were made and recommendations proposed.

1. Some data existed to track progress in nutritional outcomes (mainly from population-based household surveys such as the EDHS), but limited data were available to adequately track progress at the regional and sub-regional levels. Additionally, limited data were available for some target groups (adolescents) and indicators (women's diets).

Recommendation: **Future surveys and impact evaluations should focus on filling identified data gaps.**

- Program evaluation surveys, such as baseline and end-line surveys for national nutrition programs, need to be more comprehensive to fill data gaps not addressed by population-based surveys. These include information on nutritional outcomes for adolescents, dietary intakes, and coverage of nutrition-sensitive interventions.

- The scope of population-based surveys needs to be expanded to include additional indicators to assess nutritional outcomes and to assess the coverage of nutrition interventions.

2. Routine monitoring data collected by frontline workers could provide useful information on the coverage of nutrition-sensitive and nutrition-specific interventions. However, presently the coverage of all nutrition-related services provided is not tracked. While the NNP-II recognizes that multisectoral action is vital to address malnutrition, only two sectors have routine monitoring information systems of which only one tracks nutrition indicators. The UNISE is designed to collect data for nutrition-specific indicators, but its geographic coverage is limited to two regions, which limits its use.

Recommendation: **Routine monitoring information systems should be strengthened and expanded.**

- Include more nutrition indicators and nutrition-specific intervention coverage indicators into the HMIS, to reflect the priority given to nutrition through investments and political commitment.

- Prioritize the establishment of routine monitoring information systems in NNP-II implementing sectors. These systems are needed to track the implementation of nutrition-sensitive interventions.

- Expand the implementation and geographic coverage of UNISE. It should be scaled up nationally. Additionally, considerations should be made to assure the quality of data collected from sectors that do not have information systems.

3. Accessing data can be time-consuming if data sources are not stored in a central location within an institution and if there is no institutional data sharing culture. Incomplete dataset documentation (e.g., on the level of representativeness, sampling procedures, data quality assurance steps, and indicators included in the data source), further limits the ability to easily access key information.

Recommendation: **Facilitate data use by promoting better data documentation and accessibility.**

- Prioritize the establishment and maintenance of central nutrition data repository systems. This will facilitate access to data by providing meta data information on data sources (where they are stored, detailed information on their contents, how to access them).

4. Population-based surveys are ideal data sources on nutritional outcomes while routine monitoring data are useful to track intervention coverage. At times, comparisons are not always feasible for indicators included in more than one data source. Data sources might use different designs and sampling methods (population-based surveys such as the EDHS versus information systems for service users such as the HMIS) and use different indicator definitions (with differing age ranges, recall periods, and intervention doses), even though the indicator names are the same. It is therefore important for stakeholders and decision makers to know which type of data sources to use for which types of analysis and for which types of information needs.

Recommendation: **Promote the use of the best data sources for specific information needs.**

5. The current data mapping provides an initial overview of the availability and accessibility of nutrition data. However, it did not capture smaller studies that provide information at lower administrative levels. As more nutrition data are continuously being generated, it will be important to update the nutrition data mapping and to expand its scope to identify data sources at lower administrative levels.

Recommendation: **Periodically conduct nutrition data mapping with an expanded scope.**

6. The nutrition data mapping, did not focus on the whole nutrition data value chain[21]**.** This includes defining priority and standard indicators, assuring the quality of the data collection, the management and analysis of data, the translation of the findings into easy-to-understand formats, their dissemination and use in decision making. Making decisions based on evidence is important but implementing these decisions and ensuring multisectoral accountability towards their achievement, requires commitment, strong coordination and oversight.

Recommendation: **Future monitoring, evaluation and research efforts in the country should go beyond assessing data availability and accessibly but also focus on the whole nutrition data value chain.**

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Annexes

Annex I: Stakeholders contacted for the nutrition data mapping

Organization
1. Ministry of Health
2. Ministry of Agriculture
3. Ministry of Water, Irrigation and Energy
4. Ministry of Education
5. Ministry of Labor and Social Affairs
6. Ministry of Trade and Industry
7. National Disaster Risk Management Commission
8. Central Statistics Agency
9. Policy Studies Institute
10. Ethiopian Public Health Institute
11. Ethiopian Institute of Agricultural Research
12. Seqota Declaration (Ministry of Health)
13. Agricultural Transformation Agency
14. Food and Agriculture Organization
15. United Nations Children's Fund
16. World Food Program
17. World Bank
18. International Food Policy Research Institute
19. Save the Children International
20. Alive and Thrive
21. Nutrition International
22. World Vision
23. Addis Ababa University, Department of Public Health
24. Addis Ababa University, Center for Food Science and Nutrition
25. Bahir Dar University
26. Jimma University
27. Hawassa University
28. University of Gondar
29. Mekele University

Annex II: List of indicators included in the nutrition data mapping

Nutrition and Health Indicators
1. Prevalence of stunting among children under five
2. Prevalence of underweight among children under five
3. Prevalence of wasting among children under five
4. Prevalence of anemia among children 6 – 59 months
5. Prevalence of low birth weight among children under five
6. Prevalence of low BMI among women
7. Prevalence of overweight and obesity women
8. Prevalence of overweight and obesity children
9. Household dietary diversity
10. Individual dietary diversity
11. Severe Acute Malnutrition (SAM) treatment coverage
12. Proportion of schools with school feeding program
13. Deworming coverage
14. Coverage of Iron folate supplementation during pregnancy
15. Coverage of iron folate supplementation for adolescents
16. Prevalence of anemia in women of reproductive age
17. Prevalence of malaria
18. Prevalence of diarrhea
19. Prevalence of pneumonia
20. Coverage of Oral Rehydration Salt treatment
21. Coverage of presence of iodized salt
22. Coverage of use of Insecticide Treated Mosquito Nets
23. Coverage of Vitamin A supplementation
24. Proportion of expenditures allocated for food
25. Proportion of health services with essential medicines available
26. Coverage of 4+ ANC visits
27. Coverage of DTP3 immunization
28. National budget per child U5 for nutrition-specific interventions
29. Proportion of nutrition budget for treatment of SAM
30. Proportion of population below poverty line
31. Percentage of women consuming diversified meal (> 4 food groups)
32. Prevalence of exclusive breastfeeding of infants 0–6 months
33. Number of new-borns breastfed within 1 hour after delivery
34. Number of children breastfed for two years or beyond
35. Number of infants initiated with optimal complementary feeding at 6th month of age
36. Minimum diet diversity score
37. Minimum meal frequency

38. Minimum acceptable diet of children 6 – 23 months
39. Coverage of IYCF promotion programs
40. Reduction in % of stunting in children under 5 in operational areas
Agricultural Indicators
1. Household production diversity
2. Yield per crop
3. Amount of fruits and vegetables produced
4. Proportion of households with home gardens (urban or rural)
5. Amount of nutrient dense staple crops and pulses produced
6. Amount of meat produced (tons)
7. Amount of milk produced (liter)
8. Number of eggs produced
9. Number of additional hectares under irrigation schemes
10. Proportion of households with caged/fenced poultry production
11. Proportion of woredas with at least one milk collection center supported
12. Number of nutrient dense improved varieties disseminated
13. Number of food processing technologies/ practices identified and introduced
14. Number of fruit and vegetable preservation technologies introduced
15. Number of fish preservation technologies introduced
16. Number of bio-fortified crops promoted
17. Amount of crop lost at pre- and post-harvest
18. Amount of fruits and vegetables lost at pre- and post-harvest (missing)
19. Food price data
Safety net indicators
1. Number of safety net clients benefiting from fee waivers and nutrition-related conditionality
2. Number of months of self-reported food insecurity
3. Coverage of Productive Safety Net Program
4. Coverage of Urban Safety Net Program
WASH indicators
1. Proportion of households with improved drinking water supply
2. Proportion of households with hand washing facilities
3. Proportion of households with access to improved latrine facilities
4. Proportion of households practicing open defecation
5. Proportion of schools with improved water supply
6. Proportion of households with animal cohabitation
7. Proportion of households that practice safe disposal of child feces

Annex III. Description of data sources

No.	Name of data source	Institution	Type of data source	Level of representativeness	Open access	Accessible upon request
1.	Growth Through Nutrition (GTN) baseline survey	Save the Children	Survey	Project implementation woredas	No	Yes
2.	Most vulnerable households	Save the Children	Survey	Project implementation woredas	No	Yes
3.	Post distribution assessment	Save the Children	Survey	Project implementation woredas	No	Yes
4.	ENGINE birth cohort	Save the Children	Survey	Project implementation woredas	No	Yes
5.	Nutrition service quality improvement survey	Save the Children	Survey	Not representative	No	Yes
6.	SBCC quasi-experimental study	Save the Children	Survey	Project implementation woredas	No	Yes
7.	ONE WASH Phase 2 Baseline (2018)	MOWIE	Survey	National and regional	No	Yes
8.	Household Consumption Expenditure Survey	CSA	Survey	National and regional	No	Yes
9.	Welfare monitoring survey (WMS)	CSA	Survey	National and regional	No	Yes
10.	Retail price survey	CSA	Survey	National	No	Yes
11.	Agriculture producer price survey	CSA	Survey	National	No	Yes
12.	Area production and farm management practices belg season	CSA	Survey	National and regional	No	Yes
13.	Area and production of major crops meher season	CSA	Survey	National and regional	No	Yes
14.	Crop and livestock product utilization meher	CSA	Survey	National, regional, zonal	No	Yes
15.	Livestock and Livestock characteristics	CSA	Survey	National and regional	No	Yes

16.	Demographic and Health Survey	CSA	Survey	National and regional	yes	
17.	CF baseline survey	FAO	Survey	Project implementation woredas	No	Yes
18.	Household fruit and vegetable consumption baseline survey	FAO	Survey	Project implementation woredas	No	Yes
19.	Fruits and vegetables loss survey Value chain	MoA/FAO	Survey	Project implementation woredas	Yes	
20.	Fruits and vegetables value chain: Banana	MoA/FAO	Survey	Project implementation woredas	Yes	
21.	Fruits and vegetables value chain: Mango	MoA/FAO	Survey	Project implementation woredas	Yes	
22.	Fruits and vegetables value chain: Potato	MoA/FAO	Survey	Project implementation woredas	Yes	
23.	Fruits and vegetables value chain: Tomato	MoA/FAO	Survey	Project implementation woredas	Yes	
24.	Grain crop value chain	MoA/FAO	Survey	Project implementation woredas	Yes	
25.	HMIS	MOH	Routine Monitoring	National, regional, zonal, woreda	No	Yes
26.	EMIS	MOE	Routine Monitoring	National and regional	No	Yes
27.	EU-SHARE end-line (2015-2018)	UNICEF	Survey	Program implementation woredas	No	Yes
28.	EU-SHARE baseline	UNICEF	Survey	Program implementation woredas	No	Yes
29.	Baseline IYCF KAP survey (2015)	UNICEF	Survey	Program implementation woredas	No	Yes
30.	End-line IYCF KAP survey (2018)	UNICEF	Survey	Program implementation woredas	No	Yes
31.	WASH/MUS/CBN baseline survey (2013)	UNICEF	Survey	Program implementation woredas	No	Yes
32.	KAP adolescent	UNICEF	Survey	Program implementation woredas	No	Yes
33.	CBN baseline survey (2013)	UNICEF	Survey	Program implementation woredas	No	Yes
34.	CBN end-line survey (2017)	UNICEF	Survey	Program implementation woredas	No	Yes
35.	Complementary food optimization	EIAR	Survey	Not representative	Yes	
36.	NIMS	Nutrition International	Survey	Program implementation woredas	No	No
37.	Seqota Declaration baseline survey	EPHI	Survey	Program implementation woredas	No	Yes
38.	National micronutrient survey	EPHI	Survey	National and Regional	No	Yes
39.	National food consumption survey	EPHI	Survey	National and Regional	No	Yes
40.	1000 Plus	EPHI	Survey	Research implementation woredas	No	Yes

41.	Quality protein maize (QPM)	EPHI	RCT	Not Representative	Yes	
42.	Edible oil safety	EPHI	Survey	Research implementation woredas	No	Yes
43.	STEPS Risk factors and prevalence of NCD	EPHI	Survey	National and regional	No	Yes
44.	Complementary Feeding	EPHI	RCT	Research implementation woredas	No	Yes
45.	SURE baseline	EPHI	Survey	Program implementation woredas	No	Yes
46.	Evaluation of chickpea based ready to use supplementary feeds for management of MAM	EPHI	RCT	Not representative	No	Yes
47.	PSNP-IV BMGF Survey	IFPRI	Survey	Program implementation woredas	No	No
48.	Feed the future 1: baseline	IFPRI-CSA	Survey	Program implementation woredas	No	No
49.	Feed the future 1: midline	IFPRI-CSA	Survey	Program implementation woredas	No	No
50.	Feed the future 1: end line	IFPRI-CSA	Survey	Program implementation woredas	No	No
51.	Feed the future 2: baseline	IFPRI-CSA	Survey	Program implementation woredas	No	No
52.	Urban household food consumption survey	IFPRI	RCT	Program implementation woredas	No	No
53.	Alive and Thrive end-line evaluation survey (Phase 2)	IFPRI	Survey	Program implementation woredas	Yes	
54.	Alive and Thrive baseline survey Phase I	IFPRI	Survey	Project implementation woredas	No	No
55.	Alive and Thrive end-line survey Phase II	IFPRI	Survey	Project implementation woredas	No	No
56.	Alive and Thrive baseline survey Phase II	IFPRI	Survey	Project implementation woredas	No	No
57.	PSNP 4	MOA	Survey	Regional	No	No
58.	AGP-I baseline	MOA	Survey	Program implementation woredas	No	No
59.	AGP-I midline	MOA	Survey	Program implementation woredas	No	No
60.	AGP-I end-line	MOA	Survey	Program implementation woredas	No	No
61.	Young lives study	Policy Studies Institute	Longitudinal follow-up	National	Yes	
62.	UNISE	MOH	Routine Monitoring	Program implementation woredas	No	Yes

Annex IV. Indicators included in the UNISE

#	Indicators	Reporting level	Reporting frequency
	Health		
1.	Proportion of currently pregnant women and caregivers of children 0-23 months who attended a community conversation session during the reporting period	Kebele	Monthly
2.	Proportion of currently pregnant women and caregivers of children 0-23 months who were exposed to religious leader (priest or imam) discussion of MIYCN during this reporting period	Kebele	Monthly
3.	Number of pregnant women who received MIYCN counseling during ANC visits	Kebele	Quarterly
4.	Number of caregivers of children 0-24 months who received IYCN counseling during any point of contact at health facilities	Kebele	Quarterly
5.	Number of cooking demonstration sessions conducted at any level (health post, health center or community level) during the reporting period	Woreda	Monthly
6.	Number of pregnant and lactating women who participated in at least one cooking demonstration during the reporting period	Woreda	Monthly
7.	Proportion of health facilities that have access to safe and adequate water supply	Woreda	Quarterly
8.	Proportion of health facilities that have access to improved latrine	Woreda	Quarterly
9.	Proportion of Kebeles that declared open defecation free	Woreda	Quarterly
10.	Number of health facilities upgraded	Woreda	Bi-annually
11.	Proportion of households that have access to improved latrines	Kebele	Monthly
	Agriculture		
1.	Proportion of households participated in bio-fortified crop production	Kebele	Quarterly
2.	Proportion of households participated in nutrition dense pulses production	Kebele	Quarterly
3.	Proportion of irrigated land developed (in hectare)	Kebele	Quarterly
4.	Proportion of households with milking goats.	Kebele	Quarterly
5.	Proportion of households with poultry	Kebele	Quarterly
6.	Proportion of households engaged in fish production	Kebele	Quarterly
7.	Proportion of households with improved beehives	Kebele	Quarterly
8.	Proportion of agricultural extension workers who have received at least one nutrition-sensitive agricultural and livestock related training as of this reporting period	Kebele	Quarterly
9.	Proportion of households that engaged in small scale irrigation (SSI)	Kebele	Quarterly
10.	Proportion of farmers' training centers with nutrition corners during the reporting period	Kebele	Quarterly
11.	Proportion of farmland covered with water and soil conservation	Kebele	Quarterly
12.	Proportion of pregnant and lactating women food insecure households reached through PSNP	Kebele	Quarterly
13.	Proportion of pregnant and lactating women engaged in on farm/off farm income generating activities	Kebele	Quarterly

14.	Number of fruit and vegetable seedlings produced by private and community seed producers	Kebele	Quarterly
15.	Proportion of households with homestead gardening of vegetables and fruits	Kebele	Monthly
16.	Proportion of households that are using improved post-harvest technology	Kebele	Monthly
17.	Quintal of nutrient dense seed produced by private and community seed producers	Woreda	Quarterly
	Water, Irrigation and Energy		
1.	Number of existing water supply schemes in the Woreda as of this reporting period	Woreda	Monthly
2.	Proportion of households that have access to improved water source during the reporting period	Woreda	Quarterly
3.	Proportion of Kebeles with functional WASH committee	Woreda	Quarterly
4.	Proportion of constructed irrigation schemes coverage in hectares during this reporting period	Woreda	Bi-annually
5.	Proportion of non-functional water supply during the reporting period	Kebele	Quarterly
6.	Proportion of households that received alternative energy sources during the reporting period.	Kebele	Quarterly
7.	Proportion of WASH committee members who have received at least one WASH related training during this reporting period	Kebele	Quarterly
8.	Proportion of water schemes with an established WASHCO during the reporting period	Kebele	Quarterly
9.	Proportion of water supply schemes rehabilitated/ maintained	Kebele	Quarterly
10.	Proportion of water supply schemes with solar power	Kebele	Quarterly
11.	Number of water supply schemes constructed during the reported period	Kebele	Quarterly
12.	Number of irrigation schemes constructed during the reported period	Kebele	Quarterly
	Education		
1.	Proportion of schools with School Feeding Program during the reporting period	Kebele	Quarterly
2.	Proportion of schools with health and nutrition clubs	Kebele	Quarterly
3.	Proportion of schools with improved hand washing facilities	Kebele	Quarterly
4.	Proportion of schools that implemented full school health nutrition package	Kebele	Quarterly
5.	Proportion of schools with separate latrine for female and male during the reporting period	Kebele	Quarterly
6.	Proportion of schools with adequate and safe drinking water	Kebele	Monthly
7.	Proportion of students who attended at least one training session on WASH and school health and nutrition program during the reporting period	Kebele	Monthly
8.	Proportion of schools with school gardening during the reporting period	Kebele	Monthly
9.	Proportion of schools with access to menstrual hygiene management facility	Kebele	Monthly
10.	Number of schools under the shed/tree transformed	Woreda	Annually
	Labor and Social Affairs		

1.	Proportion of pregnant and lactating women newly linked to total direct support during the reporting period	Kebele	Monthly
2.	Proportion of total direct support beneficiary pregnant and lactating women who participated in soft conditional services during the reporting period	Kebele	Monthly
3.	Proportion of acute malnutrition affected households that received fee-waiver schemes during the reporting period	Kebele	Monthly
4.	Proportion of households with malnourished children that participated in soft constitutionality services during the reporting period	Kebele	Monthly
5.	Number of permanent direct support beneficiaries	Kebele	Monthly
6.	Proportion of PSNP pregnant women participated in 4 ANC sessions	Kebele	Monthly
7.	Proportion of children under two in PSNP households who participated in GMP during the reporting period	Kebele	Monthly
8.	Proportion of PSNP pregnant women and lactating women participated in nutrition counseling or behavior change communication (BCC) session at health facility	Kebele	Monthly
9.	Total number of children 6-59 months in PSNP households who received complete vaccination	Kebele	Monthly
10.	Proportion of social workers trained on social work case management	Woreda	Quarterly
11.	Proportion of beneficiaries pass through the case management	Woreda	Quarterly
	Women's and Children Affairs		
1.	Proportion of women who participated in small and micro enterprises during the reporting period	Woreda	Quarterly
2.	Number of panel discussion/ consultative meetings on gender issues during the reporting period	Woreda	Quarterly
3.	Number of mobile daycares established	Woreda	Quarterly
4.	Proportion of kebeles that declared "Harmful Traditional Practice free" during the reporting period	Woreda	Quarterly
5.	Proportion of women that attended at least one training on gender issues during the reporting period	Kebele	Monthly
6.	Proportion of women and youth who attended at least one nutrition and health training during the reporting period	Kebele	Monthly
7.	Number of adolescents saved from underage marriage	Kebele	Monthly
8.	Proportion of underage marriage during the reporting period	Kebele	Monthly
9.	Proportion of women headed households engaged in income generating activity	Kebele	Monthly
10.	Number of orphan and vulnerable children supported	Kebele	Monthly

Annex V. Indicators included in the NNP-II

Indicators
SO 1. Improve the nutritional status of women (15–49 years) and adolescent girls (10–19 years)
Proportion of adolescent girls aged 10-19 years supplemented with IFA
Prevalence of anemia in adolescents aged 10-19 years
Proportion of adolescents received deworming tablets
Proportion of adolescent girls married below 18 years
Prevalence of teenage (15-19 years) pregnancy
Prevalence of anemia among women of reproductive age (15-49 years)
Prevalence of anemia among adolescent girls
Prevalence of anemia among pregnant women
Proportion of PLW provided acute malnutrition treatment or support in targeted woredas
Percentage of women consuming diversified meal (> 5 food groups) during pregnancy
Percentage of pregnant women consuming additional meal during pregnancy
Proportion of pregnant women receiving IFA supplements for at least 90 days
Proportion of women who received deworming drugs during recent pregnancy
Percentage of households using adequately iodized salt (>15 ppm)
SO 2. Improve the nutritional status of children from birth up to 10 years
Proportion of infants 0-6 months exclusively breastfed (%)
Percentage of newborns who started breastfeeding within 1 hour of birth
Number of health facilities implementing 10 steps of BFHI
Maternity leave proclamation revised to align with ILO/global recommendations
Proportion of children age 6-23 months with minimum dietary diversity score
Proportion of children age 6-23 months who received minimum meal frequency
Proportion of children age 6-23 months who received minimum acceptable diet
Proportion of school age children 6-14 years with median urinary iodine > 100 ppb
Proportion of infants 6–8 months of age who receive solid, semi-solid or soft foods
Proportion of GMP participation among children under 2
Prevalence of anemia in children 6-59 months (sex disaggregated)
Targeted coverage of vitamin A supplementation in children (6-59 months)
Proportion of children 0 to 59 months receiving zinc for acute diarrhea treatment
Proportion of children 24 to 59 months dewormed
Proportion of children 0 to 59 months with SAM treated
Proportion of health facilities providing SAM (OTP and SC) services
Prevalence of overweight for women of reproductive age
SO 3. Improve the delivery of nutrition services for communicable and non-communicable or lifestyle related diseases.
Number of health facilities providing nutrition counseling for at least two non-communicable diseases/lifestyle related diseases (diabetes, hypertension, cancer, obesity, CHD/CVD, etc.)
Number of health facilities providing NACS for HIV and TB cases
# of PLHIV received nutrition counseling through NACS
# of HIV clients who received nutrition assessment
# of HIV clients who are identified as malnourished
# of HIV clients who received nutrition counseling
# of HIV clients who have got nutrition support

# of TB clients who received nutrition assessment
# of TB clients who are identified as malnourished
Number of TB clients who received nutrition counseling
Number of TB clients who have got nutrition support
Number of health workers in TB clinics/multi-drug resistance (MDR) TB trained on NACS
SO 4. Strengthen the implementation of nutrition-sensitive interventions across sectors.
Result 4.1. Strengthened implementation of nutrition-sensitive interventions in agriculture
Proportion of households consumed fruits and vegetables
Proportion of households consumed animal source foods
Proportion of households with homestead gardening
Number of groups engaged in community horticulture production
Number of fruit nursery sites established/supported at national level
Proportion of urban households in zonal capitals with urban gardening
Proportion of urban areas with mushroom producing groups
Proportion of rural/urban households practicing caged/fenced poultry
Number of poultry multiplication centers (both private and gov.) in each region
Proportion of woredas with at least one milk collection center supported
Proportion of potential lakes with fish producing groups supported
Fish hatching center established/supported
Number of community ponds established
Number of food processing technologies/practices identified and introduced
Number of fruit and vegetable preservation technologies/practices identified and introduced
Number of fish preservation technologies identified and introduced
Number of nutritionally improved varieties of seeds released/adopted and disseminated
% of FTCs with nutrition corner
Number of woreda with women group engaged in local production of complementary food
Number of women's groups engaged in agricultural income generating activities
Number of nutritionally improved seed varieties released by agricultural research centers
Result 4.2. Strengthened implementation of nutrition interventions in the education sector
Proportion of schools promoting selected nutrition actions through health and nutrition school clubs
Proportion of schools that have model school gardening
Proportion of primary schools (5-10) conducting biannual deworming
Proportion of primary schools (10-19) conducting biannual deworming
Proportion of primary schools with school feeding program
Proportion of schools with homestead grown gardening school feeding
Number of students graduated with nutritional sciences disaggregated by level, type and sex
Number of health, agriculture and technology institutions that have incorporated nutrition courses into their curriculum
Gender parity index in primary and secondary education (F/M) (Note: P1: primary 1st ; P2: primary 2nd ; S1:secondary 1st ; and S2: secondary 2nd)
Adult literacy program curriculum included nutrition
Proportion of universities with nutrition training programs providing community nutrition services
Result 4.3. Strengthened nutrition-sensitive interventions in the water, irrigation and electricity sector
% of households with clean and safe drinking water supply

Proportion of households benefited from small scale irrigation (SSI) schemes with multiple use of water
Proportion of schools with water supply
Hectares of farmlands cultivated through irrigation (ha X 1000)
Proportion of households with hand washing facilities
Result 4.4. Strengthened nutrition-sensitive interventions in the industry sector
Proportion of flour producing industries fortifying wheat flour, blended foods
Proportion of oil processing industries fortifying edible oil with Vitamin A
Number of awareness creation events conducted in the private sectors related to requirements and standards of locally manufactured food items
Result 4.6. Strengthened social protection services for improved nutrition
Proportion of households graduated from PSNP
Proportion of women's self-help groups received grants and credits
Proportion of women's self-help groups trained on key nutrition practices
Number of woredas providing nutritional services for elderly poor
Number of primary schools in food-insecure woredas with school feeding program
Proportion of declared nutrition emergencies responded to within 72 hours
Result 4.8. Ensured quality and safety of nutrition services and supplies
Proportion of imported food items inspected for compliance with food safety and quality standards
Number of standards developed for food and food items
Number of regulations developed for food and food items
Number of companies certified for competency on food items production and trade
Number of fully tested nutrition products (infant formula, premix, nutrition supplements, micronutrients…)
Number of registered food and nutrition products
Percent of public water supply ensured for quality and safety as per the standard
Number of promotions/ policy dialogue made on enforcement of regulation on advertisement of unhealthy diet / beverages
Result 4.9. Improved nutrition supply management
Proportion of health facilities with IFA stocked out.
No. of nutrition supply stock status reports shared
SO 5. Improve multisectoral coordination and capacity to ensure implementation of the NNP
Number of sectors established Nutrition Directorate
Number of sectors established nutrition case team at federal
National Institute of Nutrition and Food Research established
National Nutrition and Food Policy developed
Proportion of NNP implementing regional bureaus with nutrition case team
Proportion of woredas reporting multisectoral nutrition coordination activity to the higher level
Proportion of woredas with nutrition coordination platform
Proportion of woredas with kebele level nutrition coordination platform
Proportion of woredas offices with nutrition coordinator/ dedicated focal points
Proportion of health development army (HDA) trained in the preparation of complementary food

Annex VI. Data sources that provide nationally and regionally representative data to track progress against NNP-II targets

Data source	Data source type	Representativeness	Frequency of data collection
Ethiopia Demographic and Health Survey	Population- based household survey	National and Regional	Every five years
Ethiopia Mini Demographic and Health Survey	Population- based household survey	National and Regional	Between EDHS surveys
Household Consumption and Expenditure Survey	Population- based household survey	National and Regional	Every five years
Welfare Monitoring Survey	Population- based household survey	National and Regional	Every five years
National Micronutrient Survey	Population- based household survey	National and Regional	NA
National Food Consumption Survey	Population- based household survey	National and Regional	NA
Ethiopia STEPwise approach to Surveillance (STEPS) Non-communicable Disease Risk Factors	Population- based household survey	National and Regional	NA
Livestock and Livestock characteristics	Smallholder household agricultural survey	National and Regional	Annually
Area and production of major crops Meher*	Smallholder household agricultural survey	National and Regional	Annually
Area production and farm management practices Belg*	Smallholder household agricultural survey	National and Regional	Annually
Crop and livestock product utilization Meher	Smallholder household agricultural survey	National, Regional and Zonal	Annually
Health Management Information System (HMIS)	Routine monitoring	National, Regional, Zonal and Woreda (for service users)	Monthly

*Meher: Crops harvested between September and February. It is the main crop season. Belg: Crops harvested between March and August.

Annex VII. Availability of national and sub-national data to track progress in global nutrition indicators

Indicator	National	Sub-national	Data source
Outcome indicators (WHA targets)			
Prevalence of stunting in children under five years of age	Yes	Yes	EDHS 2016, EMDHS 2019
Prevalence of anemia in women of reproductive age	Yes	Yes	EDHS 2016
Prevalence of infants born <2500 g	Yes	Yes	EDHS 2016
Prevalence of overweight (weight-for-height >+2 SD) in children under five years of age	Yes	Yes	EDHS 2016, EMDHS 2019
Prevalence of exclusive breastfeeding in infants aged six months or less	Yes	Yes	EDHS 2016, EMDHS 2019
Prevalence of wasting in children under five years of age	Yes	Yes	EDHS 2016, EMDHS 2019
Intermediates outcome indicators			
Prevalence of diarrhea in children under five years of age	Yes	Yes	EDHS 2016
Proportion of women aged 15–49 years with low body mass index (<18.5 kg/m2)	Yes	Yes	EDHS 2016
Number of births during a given reference period to women aged 15–19 years /1000 females aged 15–19 years	Yes	Yes	EDHS 2016
Proportion of overweight and obese women 18+ years of age (body mass index ≥25 kg/m2)	Yes	Yes	EDHS 2016
Proportion of overweight in school-age children and adolescents 5–19 years (BMI-for-age >+1 SD)	No	No	
Process indicators			
Proportion of children aged 6–23 months who receive a minimum acceptable diet	Yes	Yes	EDHS 2016, EMDHS 2019
Proportion of population using safely managed drinking water services	No	No	
Proportion of population using safely managed sanitation services	No	No	
Proportion of pregnant women receiving iron and folic acid supplements	Yes	Yes	EDHS 2016, EMDHS 2019
Percentage of births in baby-friendly facilities	No	No	
Proportion of mothers of children 0–23 months who have received counseling, support or messages on optimal breastfeeding at least once in the previous 12 months	No	No	
Policy environment and capacity indicators			
Number of trained nutrition professionals/100,000 population	No	No	
Presence of legislation/regulations fully implementing the International Code of Marketing of Breast Milk Substitutes	Yes	Yes	Legislation
Maternity protection laws or regulations in place	Yes	Yes	Legislation