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Landscape of official development assistance for nutrition data and information systems

Alexandra Farina [ID] ,[1] Yashodhara Rana,[1] Augustin Flory,[1] Kyle Borces,[2] Caroline Snead,[3] Rebecca Heidkamp[4]

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[1]Results for Development Institute, Washington, District of Columbia, USA
[2]ThinkWell, Washington, District of Columbia, USA
[3]Independent Researcher, Los Angeles, California, USA
[4]International Health, Johns Hopkins University Bloomberg School of Public Health, Baltimore, Maryland, USA

Correspondence to
Dr Yashodhara Rana;
yrana@r4d.org

ABSTRACT

Nutrition data and information systems (ND&IS) are critical to guide the prioritisation, collection, analysis and dissemination of nutrition data in countries. However, there is limited guidance for countries regarding how to invest in their ND&IS and little is known about current financing allocations by both countries and donors. This hinders our ability to identify the most critical funding gaps and to effectively advocate for increased financial commitments to ND&IS. To better characterise donor investments, we conducted a review of Official Development Assistance (ODA) financing for ND&IS between the years 2017 and 2019. The analysis showed overall donor financing for ND&IS is not trending up between 2017 and 2019 with the majority of funding being channelled through multilateral organisations to the health sector and spent on global initiatives and emergency early warning system and surveillance activities. Given these findings, donors should dedicate at least 5% (4%–6%) of nutrition investments, alongside country governments, to support country capacity building and strengthening of ND&IS. Donors should also consider channelling a larger part of ODA for ND&IS activities through public institutions to build their capacity to manage ND&IS strengthening.

INTRODUCTION

"Without good data, we are flying blind. If you can't see it, you can't solve it," as the late Kofi Annan famously said about nutrition.
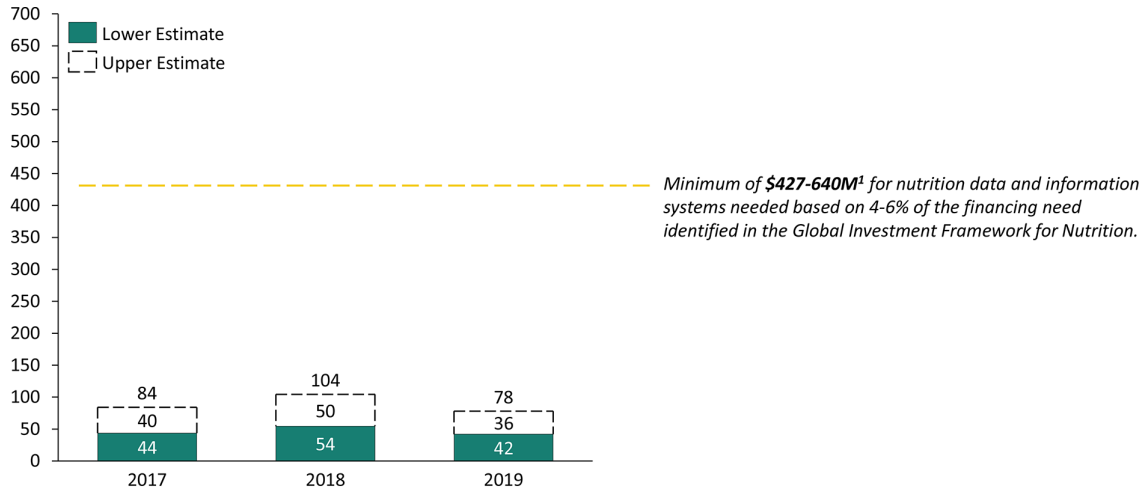
Highlighting the vast gaps and weaknesses in nutrition data, the Global Nutrition Report (GNR) called in 2014 for a data revolution to accelerate progress towards the World Health Assembly (WHA) targets and support the achievement of the Sustainable Development Goals. In 2017, the GNR used the concept of the data value chain (DVC)[1] as a framework to guide improvements in data availability and use.[2] Since the introduction of this framework, significant work has been done at the global and country levels to strengthen the DVC and country data plans, however the COVID-19 pandemic has highlighted the urgent need to increase investments in data

Summary box

► Nutrition data and information systems are designed to collect, analyse and share timely nutrition data to monitor the status of nutrition priorities and programmes at the national level and inform decisions around programme planning, budgeting and advocacy.
► There are no accessible estimates of current financing allocations for nutrition data and information systems (ND&IS) by both countries and donors.
► Overall annual Official Development Assistance (ODA) for ND&IS, while significant at an average of $47 million (lower estimate) and $89 million (upper estimate) per year, is not trending up, with an increase between 2017 and 2018 and an equivalent decrease between 2018 and 2019.
► Most funding was directed to global initiatives, early warning system/surveillance systems, and periodical data collection activities, and flowed through multilateral organisations and non-governmental organisations. Comparatively, less funding was spent on country capacity strengthening activities or channelled directly to governments and public sector institutions.
► The top ND&IS donors are the same as the top nutrition financing donors, and most of their ND&IS development assistance is channelled to the health sector with less to other sectors addressing underlying causes of malnutrition.
► Donors should dedicate at least 5% of nutrition investments, alongside country governments, to support country capacity building and strengthening of ND&IS.
► Donors should also consider channelling a larger part of ODA for ND&IS activities through public institutions to build their capacity to manage ND&IS strengthening.

and information systems to provide an effective response to the challenges brought about by the pandemic.

Nutrition data and information systems (ND&IS) are an integrated set of principles, practices and processes guiding the prioritisation, collection, storage, organisation,

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Minimum of **$427-640M[1]** for nutrition data and information systems needed based on 4-6% of the financing need identified in the Global Investment Framework for Nutrition.

1. The Global Investment Framework for Nutrition estimates that $70b is needed from all sources over the next 10 years to reach the WHA targets for nutrition. Therefore, for one year, we assumed there is a need of $10.4b in financing for nutrition. We then took 98% of this number to account only for direct program costs. Next, we applied the 4-6% benchmark determined by the N4G financing working group to this estimate i.e. 98% of $10.4b which gave us the estimate of $427m to $640m per year needed for nutrition data related activities.

Figure 1 Total spending towards ND&IS in 2017–2019, millions US dollars.

analysis and dissemination of essential nutrition-related data drawn from multiple sectors and sources. ND&IS are critical to provide timely data to monitor the status of national and subnational nutrition priorities and programmes to inform decisions around programme planning, budgeting and design. However, there are no accessible estimates of the financing needs to strengthen global and country ND&IS. The 2020 Nutrition for Growth (N4G) Financing for Data Thematic Working Group concluded that a benchmark of 4%–6% of funding for country multisectoral nutrition plans should be allocated to data-related activities (Ellen Piwoz on behalf of the Financing for Data Thematic Working Group, 2019). This corresponds to $427–$640 million annually based on the Global Investment Framework for Nutrition (GIFN) costing estimates to achieve the WHA global nutrition targets (see figure 1 for a breakdown of this estimate).[3] However, these estimates are only focused on a limited set of direct nutrition interventions primarily

delivered by the health sector, and the required ND&IS investments in data are much larger when we account for multisectoral nutrition plans.

How close to these benchmarks are current investments in ND&IS? There is little known about current financing allocations to ND&IS by both countries and donors. This limits our ability to identify the most critical funding gaps and to effectively advocate for new strategic investments in ND&IS.

The goal of this paper is to present an aggregate picture of Official Development Assistance (ODA) for ND&IS to help inform the donor community's strategic decisions and coordination as well as country perspectives on their priorities. This is timely given the upcoming 2021 N4G Summit which will provide an opportunity for the nutrition community to renew and expand commitments towards improving malnutrition globally. It might also be of interest to national governments, implementing partners and advocates in their efforts to support ND&IS.

Periodic Data Collection	Routine Data Collection	Emergency Early Warning/ Surveillance Systems	Country Capacity Building	Global Initiatives	Other
Population-based surveys within health, agriculture, and other nutrition-sensitive sectors (i.e., Demographic and Health Survey)	Development, implementation, and data quality assurance of routine information systems	Timely systems which monitor and collect information relevant to the nutrition sector	Planning, coordination, and technical capacity building for nutrition data at the country level	Activities aimed at contributing to ND&IS more broadly through global partnerships or data sources	Other ND&IS activities including measurement innovations, monitoring & evaluation, data components of national nutrition plans, etc.

Figure 2 Description of ND&IS core activities.

Box 1   Description of data source, analytical methods and limitations

► *Data source*

We compiled our dataset by first extracting disbursement data from the Organization for Economic Co-operation and Development (OECD) Creditor Reporting System (CRS) database* from the years 2017–2019, that is, the most recent years for which data are available (see online supplemental box S1 for more information on the CRS database).

► *Methodology*

As a first step, for each year of data, we used a keyword search to identify disbursements across sectors relevant to nutrition data and information systems (ND&IS) (refer to online supplemental tables S1–S3 for the keywords used). Next, we manually screened each transaction to determine if the project included ND&IS core activities. Each disbursement determined to be ND&IS relevant was then tagged as a lower or upper estimate. Lower estimate tagging was used when the full share of the disbursement was considered relevant for ND&IS while disbursements were tagged as an upper estimate if ND&IS activities were one of several objectives and the exact share of the disbursement could not be unpacked. For the lower estimate, we captured the full disbursement value, while for the upper estimate we discounted the full disbursement value by 50% since the identified ND&IS activity contributed towards one of several objectives alongside other activities. In addition, we classified each disbursement under the most applicable ND&IS category specified in figure 2. In the few cases where disbursements had more than one explicit ND&IS activity, the disbursement was split evenly across ND&IS categories (see online supplemental figure S1 for more details).

Given that ND&IS benefits from broader investments in health information systems, the team also captured disbursements on health management information systems and District Health Information Software 2 using keywords found in online supplemental table S2.

► *Limitations*

Several limitations should be noted. First, there is no purpose code for 'information systems' for nutrition so we relied on a targeted keyword search to compile our dataset. Next, within our dataset, many disbursements included multiple objectives and provided limited information to specify the ND&IS activities. To account for these limitations, we included upper estimates to reflect the uncertainty about the value of ND&IS activities. The upper estimate was discounted by 50% to reflect that there was at least one other objective mentioned in a disbursement. We recognise this is an overestimate since a transaction can have more than two objectives and the dollar amounts going towards the each of these objectives may not be equally split. Therefore, we conducted a sensitivity analysis to determine how the upper estimate would change if it was discounted by 25% and 75% instead of 50%. We found in all scenarios, the total spending for ND&IS remains below the minimum financing need for ND&IS recommended by the Investment Framework for Nutrition (see online supplemental figure S2 for specific results).

Additionally, our analysis does not include data on philanthropic contributions or other private sources of funding, with a few noted exceptions (Bill and Melinda Gates Foundation and Children's Investment Fund Foundation), as these data are not available in the CRS. Lastly, large nutrition donors such as UNICEF and the World Bank which provide country-level technical assistance for ND&IS alongside their large programmes may not be accurately represented in our estimates given these activities are not always explicitly captured in the CRS project descriptions.

*OECD. 'Creditor Reporting System.' OECD International Development Statistics, 2019. https://doi.org/10.1787/data-00061-en (accessed August 2020).

HOW DONOR FINANCING FOR ND&IS WAS ASSESSED

This analysis focuses on core ND&IS activities while recognising that data and information strengthening in other sectors as well as broader statistical capacity building including international initiatives to support data for development have downstream benefits for ND&IS. We considered the six domains defined in figure 2 to be ND&IS core activities. These are adapted from an earlier framework[4] on the major costs behind ND&IS. Please note this analysis does not capture funding flows to independent evaluators. While such investments are critical for informing nutrition policies and programmes, they tend to be programme specific and are not building blocks of ND&IS at the country level. A detailed description of the data source and analytical methods used is provided in box 1.

OVERALL SPENDING ON ND&IS

Overall, ODA for ND&IS, while significant at an average of $47 million (lower estimate) and $89 million (upper estimate) per year, is not trending up, with an increase between 2017 and 2018 and an equivalent decrease between 2018 and 2019 (figure 1). For calibration purposes, the lower estimate of donor funding for ND&IS in 2017 ($44 million) corresponds to 3.1% of the $1397 million disbursed in 2017[5]

towards nutrition-specific priority interventions specified in the GIFN, which is significant. However, spending is not trending in the right direction, particularly given that the GIFN calls for a rapid increase in donor investments year on year.

WHAT TYPES OF ACTIVITIES WERE FUNDED?

Based on the lower estimate, the majority of funding was spent on global initiatives followed by early warning system (EWS)/surveillance systems and periodical data collection (figure 3). Examples of global initiatives included the National Information Platforms for Nutrition, Maximizing the Quality of Scaling Up Nutrition Plus (MQSUN+), Alive & Thrive and the WHO monitoring of progress towards the global nutrition targets. It is important to note that global initiatives may also have provided some country-level technical assistance. Within the early warning and surveillance system category, significant funding went towards the Famine Early Warning Systems Network and projects focused on establishing an emergency food security or nutrition surveillance/EWS. Periodical data collection included household surveys such as the Demographic and Health Survey, the Living Standards Measurement Study, and Standardized Monitoring and Assessment of Relief and Transitions surveys.
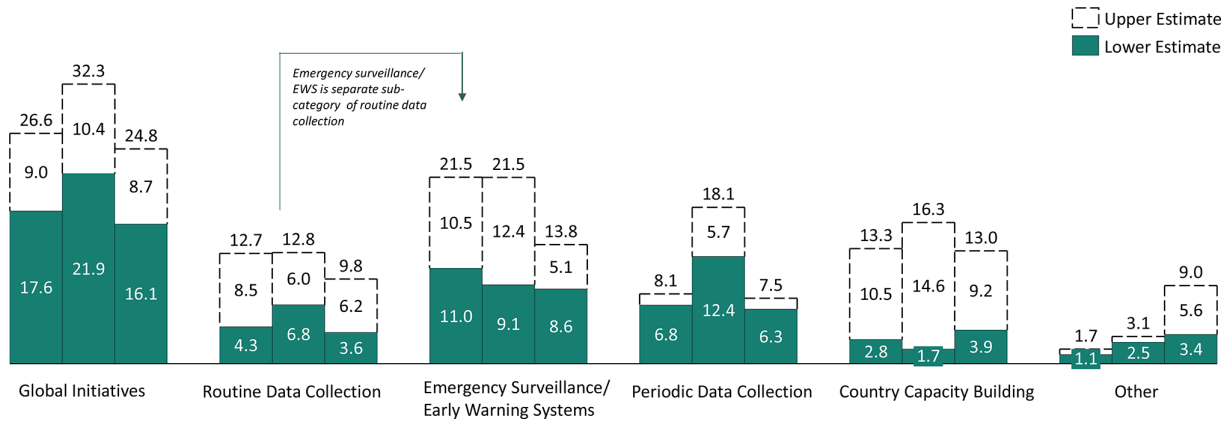
Figure 3 Breakdown of spending by ND&IS component in 2017–2019, millions US dollars.

Comparatively, less funding was identified for routine data collection and country capacity building activities, although capacity building is likely under-reported as it is often bundled with the other ND&IS components. Routine data collection included investments for nutrition information systems strengthening. While the District Health Information Software 2 (DHIS2) is used for nutrition, we did not include it here since there were no disbursements that aimed to specifically integrate nutrition indicators into the DHIS2 platform. The country capacity building category captured activities related to strengthening the collection, analysis, use, quality and monitoring of nutrition-related data. Investment in country capacity building should remain a priority since ND&IS are primarily country owned and driven, and therefore building the capacity of government and local partners to strengthen and operate the system is critical for effectiveness and sustainability (see online supplemental table S4 for additional examples of the projects captured under each category).

WHAT CHANNELS DID FUNDING FLOW THROUGH AND TO WHERE DID IT GO?
Most of the funds for ND&IS flowed through multilateral organisations, specifically UNICEF, World Food Programme, and Food and Agriculture Organization

(figure 4). The next highest levels are through non-governmental organisations and universities/research institutes. Very little ODA captured in the Creditor Reporting System (CRS) went directly towards governments and public sector institutions, with that share decreasing over time. While multilaterals are critical players in the nutrition landscape and often work at the country level with and through local partners, it is critical that more funding flows directly to the country governments to build their capacity to manage ND&IS strengthening activities.

To assess the sector towards which each contribution will go, each transaction is assigned a purpose code within the CRS database (see online supplemental box S1 for specific purpose code definitions). The majority of ND&IS disbursements come from the 'basic nutrition' purpose code which is a subcode of 'health'. There was notably less spending from the food assistance and agricultural policy and administrative management purpose codes. Given nutrition is multisectoral in nature, these findings highlight a potential gap in ND&IS relevant activities outside of the health sector.

We also captured spending focused on general health management information systems (HMIS) and DHIS2 activities given spending in these areas can provide downstream benefits for ND&IS since nutrition-specific
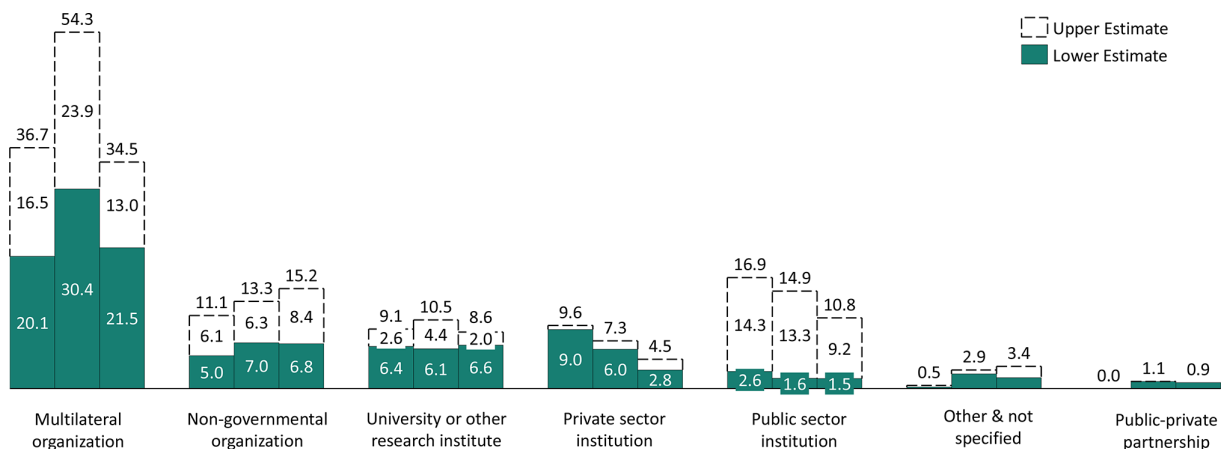

Figure 4 Breakdown of spending by channel type in 2017–2019, millions US dollars.

programmes are mainly delivered through health systems. At an average of around $4.3 million per year between 2017 and 2019, this amount is relatively small, however there may be significantly more donor spending on HMIS and DHIS2 that our methodology is not capturing given limited project descriptions. Activities captured included implementation and/or training of HMIS/DHIS2 systems.

WHO WERE THE TOP DONORS?

The European Union Institutions disbursed the most funding to ND&IS activities across all 3 years, followed by the Bill and Melinda Gates Foundation, the UK and the USA. These top donors for ND&IS are mostly consistent with the top donors of overall ODA for nutrition.[6]

CONCLUSION

ND&IS are critical to enable countries to make evidence-based decisions around nutrition programme development, resource mobilisation and policies. Based on our findings of the current financial landscape of ND&IS, we propose six recommendations for donors:

First, donors should work with governments and partners in each country to strengthen coordination and sharing of information on ND&IS to identify gaps and priorities across the nutrition data value chain, especially given pressures on domestic and donor budgets due to the COVID-19 pandemic. Governments and partners, including donors, may want to consider creating country-level technical working groups on ND&IS, if not already existing, to encourage and actively participate in collaboration, exchange of information and more strategic approaches.

Second, donors should provide financial and technical support to countries to develop and cost strategic data and information systems plans (including considerations for their financing), focusing on the different stages of the nutrition data value chain. Previous research which reviewed costed national nutrition plans for 58 Scaling up Nutrition (SUN) countries found that fewer than half of the countries had costed plans with data and monitoring and evaluation sections.[4] While MQSUN+ and other SUN partners have supported countries in developing and costing nutrition data plans, their initiatives are coming to an end and so it is critical to find new ways to continue supporting countries moving forward including through SUN 3.0.

Third, donors should dedicate at least 5% (4%–6%) of nutrition investments, alongside country governments, to support country capacity building and strengthening of ND&IS. Donors should also consider channelling a larger part of ODA towards ND&IS activities through public institutions to increase ownership and sustainability and build country capacity to manage ND&IS. As part of this, we encourage the GNR to use the Nutrition Accountability Framework to hold both donors and governments accountable for strengthening data systems and capacities across the data value chain and supporting the use of data for decision-making.[7]

Fourth, donors should support the integration of more nutrition service delivery indicators within the health information system. This can be a cost-effective way of improving nutrition data since many nutrition-specific programmes are mainly delivered through health system platforms. In addition, support for data and information systems in other sectors such as social protection should be prioritised to monitor relevant nutrition indicators.

Fifth, donors should improve reporting within the CRS to track funding more accurately towards ND&IS including more consistent capture of ND&IS activities in project descriptions.

Lastly, donors should consider supporting further research on the costing and financing of ND&IS to improve understanding of the key gaps and challenges and the development of practical solutions.

ORCID iD
Alexandra Farina http://orcid.org/0000-0001-7500-2172

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3 Shekar M, Kakietek J, Dayton Eberwein J. An investment framework for nutrition: reaching the global targets for stunting, anemia, breastfeeding and wasting. Washington, D.C.: The World Bank, 2017. Available: https://www.worldbank.org/en/topic/nutrition/publication/an-investment-framework-for-nutrition-reaching-the-global-targets-for-stunting-anemia-breastfeeding-wasting [Accessed 17 May 2021].

4 Manorat R, Rana Y, Borces K, *et al*. How are countries planning for costs of nutrition data and information systems? *Gates Open Res* 2020;4:60.

5 D'Alimonte M, Thacher E, Clift J. Tracking aid for the WHA nutrition targets: progress towards the global nutrition goals between 2015 to 2017. Washington, D.C.: Results for Development, 2018. Available: https://r4d.org/resources/tracking-aid-wha-nutrition-targets-global-spending-roadmap-better-data/ [Accessed 17 May 2021].

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7 Global Nutrition Report. The nutrition accountability framework, 2021. Available: https://globalnutritionreport.org/resources/nutrition-accountability-framework/ [Accessed 2 Jul 2021].

Supplemental Figure 1: Screening Methodology
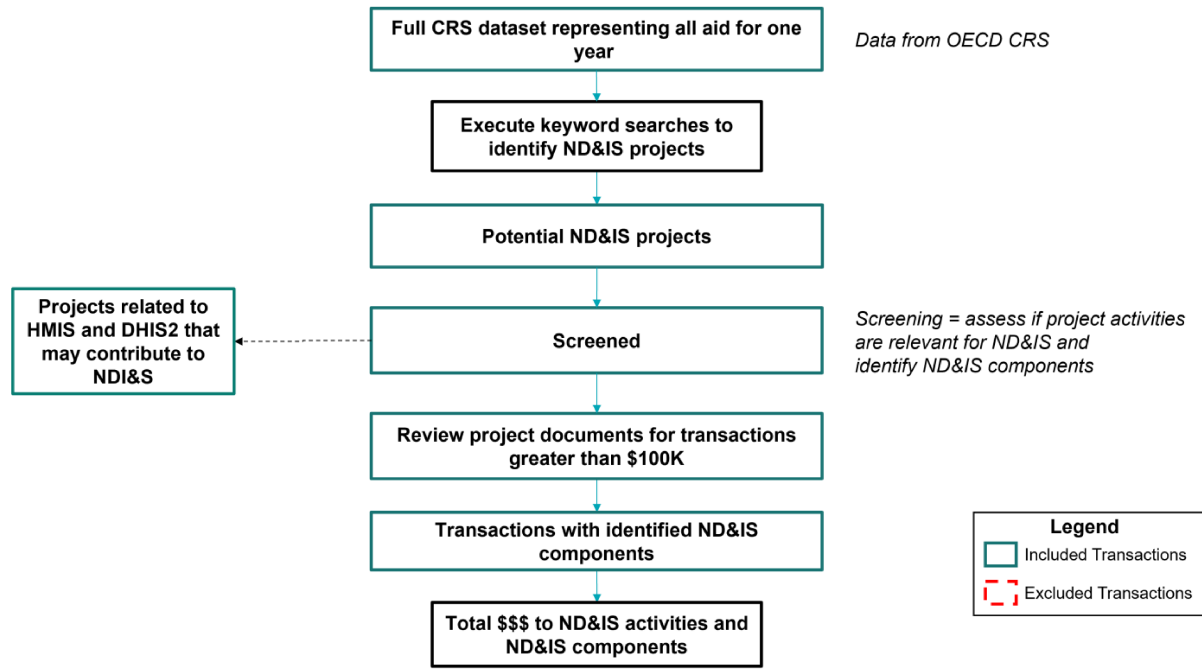
Supplemental Box 1: Overview of OECD Creditor Reporting System

The **Creditor Reporting System** is a database which includes transaction-level data for all Development Assistance Committee (DAC) country donors, multilateral donors, and private grants. The database includes information which can be used to understand where aid goes, what purpose it serves and what policies it aims to implement.

Overview of how OECD CRS data are captured and tagged:

*The purpose code is used to identify the sector of destination of a contribution.

Definitions of Top Purpose Codes:

1. **Basic nutrition**: Interventions related to micronutrient deficiency identification and supplementation; infant and young child feeding promotion including exclusive breastfeeding; non-emergency management of acute malnutrition and other targeted feeding programs (including complementary feeding); staple food fortification including salt iodization; nutritional status monitoring and national nutrition surveillance; research, capacity building, policy development, monitoring and evaluation in support of these interventions.
2. **Food assistance** - Supply of edible human food under national or international programmes including transport costs, cash payments made for food supplies; project food assistance aid and food assistance aid for market sales when benefiting sector not specified.
3. **Agriculture policy and administrative management** - Agricultural sector policy, planning and programmes; aid to agricultural ministries; institution capacity building and advice; unspecified agriculture.
4. **Health policy and administrative management** - Health sector policy, planning and programmes; aid to health ministries, public health administration; institution capacity building and advice; medical insurance programmes; including health system strengthening and health governance.
5. **Material relief assistance and services** - Shelter, water, sanitation, education, health services including supply of medicines and malnutrition management, including medical nutrition management; supply of other nonfood relief items (including cash and voucher delivery modalities) for the benefit of crisis-affected people.

Supplemental material

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Supplemental Figure 2: Sensitivity Analysis for Upper Estimate of Total Spending Towards ND&IS in 2017-2019, millions USD
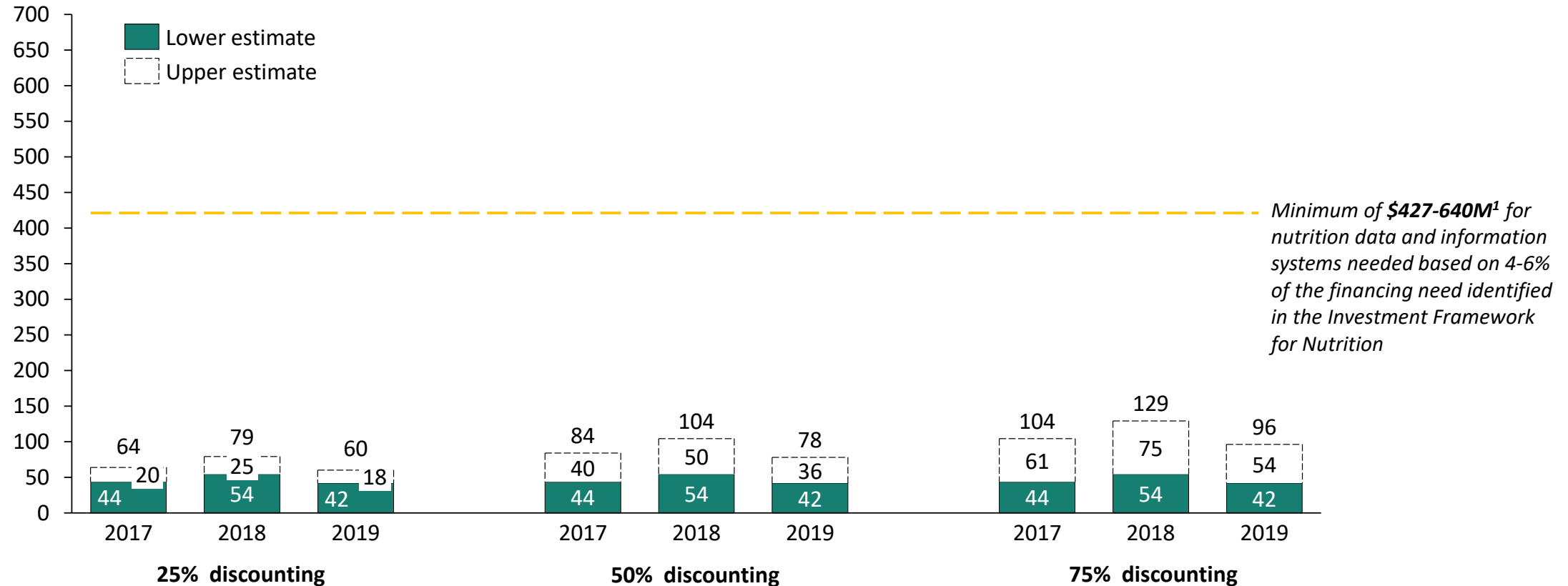
Minimum of $427-640M[1] for nutrition data and information systems needed based on 4-6% of the financing need identified in the Investment Framework for Nutrition

1. The Global Investment Framework for Nutrition estimates that $70b is needed from all sources over the next 10 years to reach the WHA targets for nutrition. Therefore, for one year, we assumed there is a need of $10.4b in financing for nutrition. We then took 98% of this number to account only for direct program costs. Next, we applied the 4-6% benchmark determined by the N4G financing working group to this estimate i.e., 98% of $10.4b which gave us the estimate of $427m to $640m per year needed for nutrition data related activities.

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Supplemental Table 1: Nutrition-specific Keywords

We extracted disbursements related to ND&IS by first pulling all nutrition-related projects in the CRS. These keywords were taken from the keyword list developed for Results for Development's work on Tracking Aid for the World Health Assembly Nutrition Targets[1]. Keywords used multiple languages, including English, French and Spanish.

Nutrition keywords	
ALNP	infant and young child feeding
ANJE	infant growth
ATLC	insuffisance pondérale
ATLU	intrauterine growth restriction
ATPE	iodation du sel
BMI	iodiz
CMAM	lactancia
IMC	lactat
iron	lait maternel
IUGR	leche materna
IYCF	légume
MUAC	linear growth
RCIU	low birth weight
RUTF	low birthweight
zinc	low sodium
aliment thérapeutique	malnourish
alimentación complementario	mid-upper arm circumference
alimentación del lactante y del niño pequeño	näring
alimentation complémentaire	nourish
alimentation du nourrisson et du jeune enfant	nourr
alimentos complementarios	nutri
alimentos terapéuticos listos para consumir	obesidad
alimentos terapéuticos listos para usar	obésité
aliments complémentaires	obesity
aliments transformés	orange fleshed sweet potato
allaitement	orange-fleshed sweet potato
alto contenido de azucar	overweight
alto contenido de grasa	patate douce à chair orange

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[1] D'Alimonte M, Thacher E, Clift J, *et al.* Tracking aid for the WHA nutrition targets: Progress towards the global nutrition goals between 2015 to 2017. Washington, D.C.: Results for Development 2018. https://r4d.org/resources/tracking-aid-wha-nutrition-targets-global-spending-roadmap-better-data/ (accessed 17 May 2021).

amamant	perímetro braquial
anaemia	peso para la edad
anemia	peso para la estatura
anémie	poids pour l'âge
arroz dorado	poids pour taille debout
azucaradas	poids-pour-l'âge
azucarados	poids-pour-taille debout
bajo contenido en sodio	poids-taille
bajo peso al nacer	processed food
bioenriquecimiento	protein energy
biofort	ravinto
body mass index	ravitsemus
breast-	RCIU
breast milk	ready to use therapeutic food
breastfeeding	ready-to-use therapeutic food
breastmilk	reduce sodium
camote anaranjado	reducir el consumo de sal
camote de pulpa anaranjada	reducir sodio
circonférence du bras à mi-hauteur	réduction de sel
comida precesada	réduire le sodium
complementary food	restricción del crecimiento intrauterino
consommation de sel	retard de croissance
consommation de sucre	retraso en talla
consumo de azúcar	riche en graisse
consumo de sal	riz doré
crecimiento fetal	sal yodada
crecimiento infantíl	salado
crecimiento lineal	salé
croissance chez l'enfant	salt intake
croissance de l'enfant	salt reduction
croissance infantile	salty
croissance linéaire	SAM treatment
debout pour l'âge	sel iodé
debout-pour-l'âge	sobrepeso
dietary diversity	stunting
diversité alimentaire	sucré
emaciación	sugar consumption
émaciation	sugar-sweeten
enriquecimiento	sugary
ernæring	suplementos de hierro
Ernährung	supplémentation en fer

estatura para el peso	surpoids
estatura para la edad	taille pour l'age
fetal growth	táplálás
folic	teneur en sodium
fólico	trans fat
folique	trans-fat
fortif	under weight
golden rice	undernourish
gras trans	underweight
grasas trans	under-weight
growth monitoring	vitamin
HarvestPlus	voeding
height-for	výživa
high in fat	wasting
índice de masa corporal	weight-for
indice de masse corporelle	

Supplemental Table 2: Nutrition Data Keywords

Within the catchment of nutrition projects extracted using keywords from **Supplemental Table 1** (nutrition-specific keywords), we used nutrition data keywords to filter for nutrition data-related activities only.

Nutrition data keywords	
Access to Nutrition Index	International Dietary Data Expansion
Agriculture management information system	Joint Child Malnutrition Estimates
Biometric data	Knowledge for Nutrition (K4N)
Cadré intégré de classification de la sécurité alimentaire	La situation des enfants dans le monde
Calidad de fortificación	L'apport alimentaire
Clasificación integrada en fases de la seguridad alimentaria	Las Plataformas Nacionales de Información sobre Nutrición
Clúster Mundial de Nutrición	Le projet international d'expansion des données alimentaires
Community-based early warning system	Le renforcement de la nutrition
Comprehensive Food Security and Vulnerability Assessments	Living standards measurement
Compte à rebours jusqu'en 2030	Medición de los niveles de vida
Countdown to 2030	mHealth
Crop and Food Security Assessment Mission	Micronutrient and food consumption survey
Cuenta Regresiva al 2030	MICS survey
Data for Decisions to Expand Nutrition Transformation	mNutrición
DATA-DENT	mNutrition
Datos abiertos nutricionales	m-Nutrition
Datos biométricos	Monitoreo y evaluación (M&E) de la nutrición
Datos de fortificación	Mouvement pour le renforcement de la nutrition
Datos de seguridad alimentaria	Mouvement SUN
Datos nutricionales	Movimiento SUN
Datos para tomar decisiones para expandir La transformacion nutricional	Movimiento SUN
Demographic and health survey	mSalud
Demographic health survey	mSanté
Demographic surveillance	Multiple indicator cluster
Dépistage nutritionnel	mVAM monitoring
DHIS2	National Evaluation Platform
DHIS-2	National family health survey
Dietary intake	National Information Platforms for Nutrition
District health information system	National nutrition survey
Données biométriques	NFHS

Données de fortification	NIPN
Données nutritionnelles	Niveau de vie
Données ouvertes nutritionnelles	Nutrition dashboard
Données pour la nutrition pour étendre la transformation de la nutrition	Nutrition data
Données sur la sécurité alimentaire	Nutrition information system
Échange global de données de fortification	Nutrition M&E
Education management information system	Nutrition monitoring
eHealth	Nutrition officer
El Intercambio de Datos	Nutrition screening
El Intercambio Global de Datos de Fortificación	Nutrition surveillance
Emergency Food Security Assessment	Nutrition surveillance system
Encuesta de consumo de alimentos	Nutrition survey
Encuesta de consumo de alimentos y micronutrientes	Nutrition system strengthening
Encuesta de Demografía y Salud	Nutritional open data
Encuesta de fortificación	Officier de nutrition
Encuesta de seguimiento del gasto público	Oficial de nutrición
Encuesta MICS	Outil de dissémination de données individuelles de consommation alimentaire au niveau mondial
Encuesta nacional de ingresos y gastos de los hogares	Partenariat mondial pour les données de développement durable
Encuesta nacional de nutrición	Performance Monitoring and Accountability
Encuesta nacional de salud familiar	Plataforma Nacional de Evaluación
Encuesta nutricional	Plateforme nationale d'évaluation
Encuesta SMART	Plateformes nationales d'information pour la nutrition
Enquête de consommation alimentaire	PMA2020
Enquête de fortification	PNIN
Enquête de la nutrition	Pouls mondial
Enquête de suivi des dépenses publiques	Public expenditure review
Enquête démographique et sanitaire	Public expenditure tracking survey
Enquête nationale sur la santé de la famille	Pulso Mundial
Enquête nutritionnelle	Qualité de la fortification
Enquête par grappes à indicateurs multiples	Rapport mondial sur la nutrition
Enquête SMART	Renforcement des systèmes nutritionnels
Enquête sur les dépenses des ménages	Revisión del gasto público
Enquête sur les micronutriments et la consommation alimentaire	Revue des dépenses publiques
eSalud	Scaling Up Nutrition (SUN)
e-Santé	Scaling Up Nutrition Movement
Estado Mundial de la Infancia	seguimiento del desempeño y responsabilidad

Evaluación de la seguridad alimentaria	Seguimiento nutricional
Évaluation de la sécurité alimentaire	Service Provision Assessment
Examen de nutrición	Sistema de alerta temprana basado en la comunidad
Expansión de datos dietéticos internacionales	Sistema de alerta temprana de hambrunas
Famine early warning system	Sistema de información de gestión agrícola
FEWS-NET	Sistema de información de gestión educativa
Fomento de la Nutrición (SUN)	Sistema de información de gestión sanitaria
Food consumption survey	Sistema de información de salud
Food security assessment	Sistema de información sanitaria
Food security data	Sistema de vigilancia nutricional
Food security monitoring	Sistemas de información de nutrición
Food security monitoring system	Sistemas de vigilancia de seguridad alimentaria
Food Security Monitoring System	SMART survey
Fortalecimiento del sistema de nutrición	Standard de vie
Fortification data	State of Food Security and Nutrition in the World
Fortification quality	State of the World's Children
Fortification survey	Suivi de la sécurité alimentaire
GFDx	Suivi et évaluation nutritionnels
Global Fortification Data Exchange	Suivi nutritionnel
Global Individual Food consumption data tool	SUN Movement
Global Individual Food Consumption Data Tool	Surveillance de la sécurité alimentaire
Global nutrition cluster	Surveillance démographique
Global Nutrition Report	Surveillance nutritionnelle
Global Partnership for Sustainable Development Data	Système d'alerte précoce
Global Pulse	Système de surveillance nutritionnelle
GODAN	Système d'information de la santé
GPSDD	Système d'information et de gestion
Grappes à indicateurs multiples	Système d'information et de gestion de l'agriculture
Health information system	Système d'information et de gestion de l'éducation
Health management information system	Système d'information nutritionnelle
Herramienta global para la divulgación de datos sobre el consumo individual de alimentos	Système d'information sanitaire de district
Household Income and Expenditure Survey	Système d'information sur la gestion de la santé
Hunger and Nutrition Commitment Index	Tableau de bord nutrition
Index d'accès à la nutrition	Tablero de nutrición

Indicadores Múltiples por Conglomerados	Transform Nutrition
Índice de Acceso a la Nutrición	Vigilancia de la seguridad alimentaria
Informe de Nutrición Mundial	Vigilancia demográfica
Ingesta dietética	Vigilancia nutricional
Integrated Food Security Phase Classification	World Bank Nutrition Country Profiles

Supplemental Table 3: Nutrition-sensitive Keywords

We took a sector specific approach for health, agriculture, education, emergency nutrition, social protection, and water, sanitation, and hygiene (WASH) to search for nutrition-sensitive data activities. We first compiled a catchment of projects that were nutrition relevant from these sectors and then we used ND&IS data related keywords to further limit the dataset. Keywords used multiple languages, including English, French, and Spanish.

Nutrition-sensitive keywords	
acuicultura	food security
agrícola	food stamps
agricole	food subsidies
agricultura	food subsidy
agricultura sensible a la nutrición	food supplement
agricultura y nutrición	food system
agricultural	food voucher
agriculture	fortificación
agriculture and nutrition	fortificación de alimentos
agriculture et nutrition	fortification
agua potable	fortification des aliments
agua y el saneamiento	ganado
agua y saneamiento	garden
aide alimentaire	hambruna
alimentación directa	handwash
alimentación escolar	health information system
alimentación general	health management information system
alimentación infantil	higiene
alimentación suplementaria	hygiene
alimentación terapéutica	hygiène
alimentation	ingesta de alimentos
alimentation complémentaire	insécurité alimentaire
alimentation des enfants	inseguridad alimentaria
alimentation directe	jabón
alimentation nutritive	jardin
alimentation scolaire	jardín
alimentation thérapeutique	lavado de manos
alimento nutritivo	lavage des mains
alimentos de emergencia	livelihood
aliments nutritifs	livelihood and vulnerability
allocations	livestock
análisis integral de seguridad alimentaria y vulnerabilidad	malnutrition aiguë
analyse complète de la sécurité alimentaire et de la vulnérabilité	moyen de subsistance

aquaculture	moyen de subsistance et vulnérabilité
asistencia alimentaria	niñez temprana
assainissement	nourriture
banco de alimentos	nutrición y agricultura
banque alimentaire	nutrientes
bétail	nutrients
biofortificación	nutriments
Biofortification	nutrition and agriculture
blanket feeding	nutrition et agriculture
bons alimentaires	nutrition sensitive
cash transfer	nutrition sensitive agriculture
cfsva	nutrition supplement
cheptel	nutritional supplement
child feeding	nutrition-sensitive
comida nutritiva	nutrition-sensitive agriculture
comida por activo	nutritious food
comida por formación	pêcherie
complément alimentaire	pesquerías
comprehensive food security and vulnerability analysis	petite enfance
consommation de nourriture	programa de alimentación
consumo de alimentos	programme d'alimentation
consumo de comida	ración de alimentos
cupones de alimentos	ration alimentaire
desarrollo de la primera infancia	régime
desnutrición aguda	routine health information system
dévelopement de la petite enfance	saneamiento
DHIS2	sanitation
DHIS-2	savon
DHIS-II	school feeding
diet	sécurité alimentaire
dieta	seguridad alimentaria
dietary diversification	sensible a la nutrición
direct feeding	sistema alimentario
distribución de comida	soap
distribution de nourriture	social transfer
district health information system	subsidio alimentario
diversificación dietética	subsidios alimentarios
diversification alimentaire	subvention alimentaire
drinking water	subventions alimentaires
early childhood	suplemento alimenticio
early childhood development	suplemento nutricional
eau et assainissement	supplementary feeding

eau potable	sustento
émaciation	sustento y vulnerabilidad
emergency food	système alimentaire
famine	therapeutic feeding
feeding program	transferencia de efectivo
feeding programme	transferencia social
fisheries	transfert social
food aid	vale de comida
food bank	voucher
food consumption	vulnerabilidad
food distribution	vulnerabilidad y sustento
food for asset	vulnérabilité
food for training	vulnerability
food fortification	vulnerability and livelihood
food insecurity	wasting
food intake	water and sanitation
food ration	
Data-related keywords (second layer)	
collecte de données	monitoreo y evaluación
contrôle et évaluation	monitoreo y evaluación (M&E) de la nutrición
data	monitoreo y evaluación de la nutrición
data collection	monitoring and evaluation
datos	mSalud
demographic and health survey	mSanté
demographic health survey	multiple indicator cluster
demographic surveillance	niveau de vie
donnée	nutrition m&e
early warning system	recopilación de datos
education management information system	resource tracking
ehealth	revisión del gasto
encuesta	seguimiento de recursos
encuesta de Demografía y Salud	sistema de alerta temprana
encuesta nacional de ingresos y gastos de los hogares	sistema de información
encuesta SMART	sistema de información de gestión
enquête	sistema de información de gestión educativa
enquête démographique et sanitaire	smart survey
enquête SMART	standard de vie
enquête sur les dépenses des ménages	suivi des ressources
eSalud	suivi et évaluation
e-Santé	suivi nutritionnel
examen des dépenses	surveillance
expenditure review	surveillance de la nutrition

Supplemental material

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BMJ Global Health

grappes à indicateurs multiples	surveillance démographique
household income and expenditure survey	survey
Indicadores Múltiples por Conglomerados	système d'alerte précoce
information system	système d'information
living standards measurement	système d'information et de gestion
m&e	système d'information et de gestion de l'éducation
management information system	système national d'information sanitaire
medición de los niveles de vida	vigilancia
mhealth	

Supplemental Table 4: Example projects captured under each ND&IS category

ND&IS Category	Type of Project Captured	Examples
Global Initiatives	Global public goods such as nutrition databases, reports, scorecards, or profiles	Global Nutrition Report, Access to Nutrition Index (ATNI), Global Open Data for Agriculture and Nutrition (GODAN), etc.
	Global level coalitions/partnerships that have ND&IS related activities	MQSUN+, Alive & Thrive, National Information Platforms for Nutrition (NIPN), etc.
Routine Data Collection	Projects focused on systems strengthening for routine information systems for nutrition	Strengthen the existing routine nutrition information systems to inform policies and programs in Burkina Faso; Strengthen Tanzania food and nutrition security information system
	Projects focused on establishing a nutrition surveillance system	National Food Security Nutritional Surveillance Project (FSNSP) to strengthen and institutionalize the nutritional surveillance system in Bangladesh
Emergency Surveillance/Early Warning Systems (EWS)	Projects related to Famine Early Warning Systems Network (FEWS NET)	FEWS NET technical support for web-based data capture, analysis, and visualization tools to better identify and report on famine threats
	Projects focused on establishing an emergency food security or nutrition surveillance/EWS system	Strengthen nutrition surveillance in drought-prone districts of Madagascar; Strengthen early warning systems for nutrition
Periodic Data Collection	Nationally representative multi-topic household surveys	Demographic & Health Survey, SMART Survey, Living Standards Measurement Study, Multiple Indicator Cluster Surveys, etc.
	Other types of large-scale surveys	Fortification Assessment Coverage Toolkit (FACT) surveys, Comprehensive Food Security & Vulnerability Analysis, Micronutrient and Food Consumption survey, etc.
Country Capacity Building	Global level coalitions/partnerships that include country level technical assistance for ND&IS	NIPN, MQSUN+, etc.
	Capacity building for routine information systems for nutrition	Technical assistance to improve nutrition data availability and use within routine data systems in Bangladesh; Improve capacity of local actors for nutritional surveillance
	Technical assistance and capacity building for surveys	Build capacity of governments to generate national data on fortification quality through FACT surveys; Build capacity to conduct the National Food and Nutrition Survey in Paraguay
	Projects related to training of national stakeholders to improve collection, usage, analysis, monitoring, reporting, and dissemination of nutrition related data	Build capacity to use the Food Insecurity Experience Scale (FIES) and the Prevalence of Undernourishment Data (PoU); Strengthen district capacity for monitoring of nutrition programs and services
	Nutrition measurement innovations	Support new methods for measuring micronutrient status; Develop a new integrated information and communication technology (ICT) tool for assessing food consumption
	Development or implementation of M&E	Implement, monitor, and evaluate multi-sectoral and multi-stakeholder national plans for nutrition

ND&IS Category	Type of Project Captured	Examples
Other	components/targets within national nutrition plans	
	Situation analyses	Conduct a situation analysis to assess resources, gaps, and priority needs for improved nutrition; Map health and nutrition activities across South Sudan to provide data for planning
	Develop, update, or review nutrition-related datasets	Support government in the review and technical update of Kenya Food Composition Tables; Develop and validate Food-Based Dietary Guidelines (FBDGs) for Ethiopia