

# **Tracking aid for the WHA nutrition targets: Global spending in 2016**

SUPPLEMENTARY MATERIAL

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## Appendix 1: Step-by-step data extraction, screening, and disbursement estimation methods

- 1) **Downloaded the full OECD Creditor Reporting System dataset for 2016.** The OECD Creditor Reporting System related files were downloaded on May 14, 2018 from OECD.Stat.org. The CRS related files dataset includes transaction-level data for all official development assistance, other official flows (non-export credit), and private grants committed/disbursed in 2015.<sup>1</sup> Qualitative variables include project titles and short/long descriptions, which provide additional information on basic project characteristics. The CRS code list is updated regularly and can be found online (OECD, n.d.).

**“Aid activity”:** the lowest level of disaggregation reported through the CRS; an aid activity represents a project/program investment and is assigned a purpose code, sector code, and all other CRS variables. Aid activities may be made up of multiple components or interventions that are not disaggregated in CRS data. For example, one aid activity may represent a maternal and child health program that includes iron/folic acid supplementation as well as immunization and antenatal care services; this aid activity has nutrition and non-nutrition components, but the whole investment may be reported by one transaction, under one purpose code (i.e., not disaggregated). Alternatively, some project/program investments are separated across different purpose codes upon reporting—this varies across donors.

In this documentation, **“aid activities”** are referred to as **“transactions”** for brevity.

- 2) **Compiled data.** We aimed to identify all transactions that potentially include investments towards the WHA targets. The catchment of transactions within the whole CRS database included:
  - a) All transactions coded under the basic nutrition purpose code (12240).
  - b) All transactions captured by a keyword search screening across all other purpose codes. The keyword search was run against project title, short description, and long description variables to identify the subset of aid that could potentially be relevant to nutrition. Supplemental Table A (at the end of Appendix 1) includes the full list of keywords used, which draws from the SUN Donor Network resource tracking method for keywords (SUN Donor Network 2013). This list of keywords was deliberately restricted to words/phrases that represent nutrition activities, indicators and/or outcomes to explicitly select for nutrition investments towards the WHA nutrition targets and not overcount. Keywords were translated into French and Spanish.

Keywords that were found to capture a high rate of false positives in the 2015 analysis were removed from the keyword list for this analysis of 2016 data. No keywords were added.

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<sup>1</sup> **Official Development Assistance (ODA):** financial support, either grants or concessional loans (grant element of at least 25%), from OECD-DAC member countries to developing countries.

**Other Official Flows (non-export credit):** loans, including refinancing loans, that either have a grant element of less than 25% or do not qualify as ODA because they are not primarily targeted towards development.

**Private Grants:** currently, BMGF is the only organization reporting private grants through the OECD

- c) All transactions that appeared to be part of the same overall project as one or more of the transactions already included in the dataset by way of the basic nutrition purpose code or keyword search. A transaction was interpreted as associated with another transaction when two transactions shared the same donor, recipient, channel, and project title. This step is needed because some donors, such as Canada, split single projects across multiple purpose codes.
- d) All additional transactions that donors noted in direct communication with R4D should be added to the dataset.

A total of **6,889 transactions** were captured and extracted into a “nutrition dataset.” Figure A1.1 shows the entire screening process undertaken to determine how many of these transactions are aligned with the WHA nutrition target framework. Note that disbursements are shown in 2016 USD to align with the actual data downloaded.

### 3) Filtered out certain categories of transactions unlikely to include nutrition.

- a) Several types of transactions were removed in an automated way:
  - i) *Loan repayments were removed.* In any given year, negative disbursement values represent loan repayments. Any negative disbursement values were excluded to not discount total funding upon summation of totals. Positive disbursements for concessional loans are currently captured at full value here. Loans and grants are currently not treated differently since the objective is to track dollars associated with programmatic scale-up (i.e., whether in loan or grant form).<sup>2</sup>
  - ii) *Known nutrition-related transactions were removed.* Within each donor workbook for review, transactions with the same project title and project descriptions were considered the same project. If there were multiple transactions within the same project and at least one was coded as basic nutrition, it was assumed that the donor had already properly identified the nutrition component (i.e. the basic nutrition transaction(s) included all relevant nutrition disbursements). As a result, the transactions in the project that were not basic nutrition were filtered out of the dataset.
  - iii) *Transactions in the general budget support purpose code (51010) were removed.* While it is possible that these transactions include some support to nutrition, it is not possible to determine with any certainty what proportion, if any, of each disbursement was relevant.

Together, these three filters resulted in the removal of 831 transactions from the nutrition dataset with a combined value of \$243 million.

- b) *Transactions from purpose codes highly likely to contain false positives were removed.* (Note that this step is listed here for clarity, but actually occurred once screening was nearly complete). Once most qualitative screening had been completed (see step 4 below), a list of purpose codes represented in the nutrition dataset for which no nutrition disbursement had yet

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<sup>2</sup> This poses a question: Should loans and grants be treated in the same way, or differently? Some argue that loans and grants both represent money being deployed for programmatic scale up of nutrition programs. Others argue that loans are not donor aid in the same ways as grants as they must be repaid; and therefore should be predominantly considered as domestic financing, with some aid value attributed to any concessions on the loans.

been identified was compiled, with the thinking that transactions in those purpose codes were likely to be false positives (to illustrate, the purpose codes with the greatest number of transactions were agricultural policy and administrative management; food crop production; and STD control including HIV/AIDS). The included transactions were rapidly reviewed and those that appeared highly unlikely to be relevant were excluded. This resulted in the exclusion of 1,037 transactions with a combined value of \$202 million.

4) **Qualitatively screened transactions.** A team of three researchers screened transactions included in the nutrition dataset to i) remove any ‘false positives’ (i.e., investments caught in the keyword search that were not in fact nutrition programs), ii) for transactions outside the basic nutrition code, estimate the proportion of the program that should be allocated to nutrition, and iii) identify the interventions present within that transaction. This process is described:

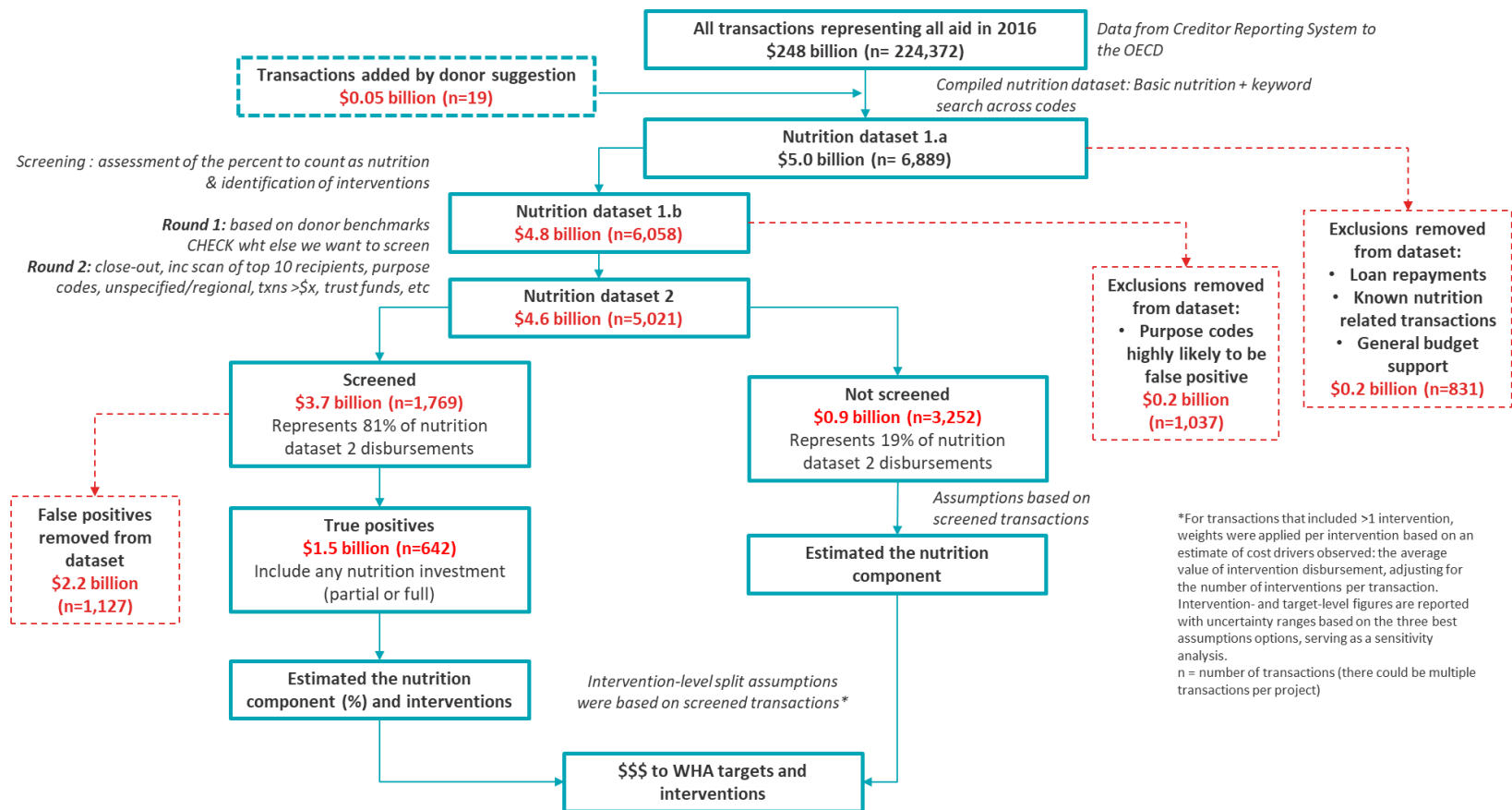
a) **Benchmark setting and prioritization:** Within the nutrition dataset, the top 20 donors for nutrition by disbursement value were included in the screening process, along with 7 more included for consistency with the 2015 analysis or for other special importance. Coders were assigned full donor workbooks to enhance coding reliability and consistency within donor profiles.

A qualitative screening benchmark was set at 70% of donor disbursements,<sup>3</sup> meaning the aim was to review transactions that represent at least 70% of donor disbursements. While there is no gold standard to compare this benchmark to, screening 70% of disbursements was determined to be an appropriate level of screening to assess a donor’s investment, based on consultation with stakeholders. Furthermore, because there are many transactions with small dollar amounts, returns to screening additional projects decline substantially as more projects are screened. This screening goal was met for all 27 of the included donors. Transactions were prioritized by size of disbursement to ensure the largest projects were reviewed.

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<sup>3</sup> The benchmark was established per donor and applied for all disbursements as well as for basic nutrition disbursements.

**Figure A1.1: Screening process flow chart (total transaction disbursement in 2016 USD; n=number of transactions)**



Note: Due to rounding, disaggregated numbers presented may not sum to exact total amounts shown. Disbursements shown in 2016 USD.

b) **Removing false positives and quantifying the nutrition component within projects:** All transactions in the basic nutrition purpose code were included in the dataset at 100%. For any purpose code *outside* basic nutrition, reviewers screened whether the transaction was in fact a nutrition investment. Then, they estimated how much of the disbursement to count towards nutrition. External project documents were referenced to estimate the share of the transaction counted as nutrition. Based on the findings, coders reported an upper and lower estimate for the nutrition component based on the following rubric:

- 1-25%: nutrition interventions represent a small component of the project/programs
- 25-50%: nutrition interventions represent a moderate component of the project/programs
- 50-75%: nutrition interventions represent a large component of the project/programs
- 75-100%: nutrition interventions represent most of the project/program

Because this is somewhat subjective without the actual financial breakdown of projects, reviewers provided a range of what to count towards nutrition. We have a low estimate and a high estimate of nutrition component disbursements.

Through this process, among screened transactions, 642 transactions were counted in full or in part towards the WHA targets.

See **Appendix 4** for a list of purpose codes included.

c) **Identified interventions:** Coders used short and long descriptions and external document review to identify which interventions were delivered through the transaction. When available through external document review, the breakdown of disbursement by intervention was recorded, though this data was found for a minority of cases.

General instructions for coders:

**CASE A.** If the nutrition component was made up of multiple nutrition activities with *separate* funding streams, implemented separately (e.g., research to support nutrition and vitamin A supplementation):

- In this case, both R&D and vitamin A were identified and two intervention codes applied.

**CASE B.** If the nutrition component was made up of multiple nutrition activities with *the same* funding streams (e.g., research on vitamin A):

- In this case, only one code—the dominant code—was applied. This was done so that transactions were not artificially split in a way that doesn't make sense programmatically. If one of the two activities was above-service delivery (e.g. research, capacity building), the above-service delivery code was applied. That is, research on vitamin A supplementation would be coded as research.

d) **Number of transactions screened:** Within the nutrition dataset, 1,769 transactions were screened, representing 81% of total disbursements. Of these screened transactions, 642 were identified as having a nutrition component (Table A1.1).

**Table A1.1: Total number of transactions screened from the nutrition dataset<sup>4</sup>**

Screening status	Number of transactions	Total disbursement value (USD, millions)	Disbursement value as a share of total (%)
Removed from dataset prior to manual screening (i.e. loan repayments, general budget support, known nutrition-related transactions, and purpose codes highly likely to be false positive)	1,868	445	9
Included in dataset for manual screening	5,021	4,576	91
<i>Not screened</i>	<i>3,252</i>	<i>855</i>	<i>19</i>
<i>Screened</i>	<i>1,769</i>	<i>3721</i>	<i>81</i>
Not nutrition	1,127	2,173	58
Kept in nutrition database to determine nutrition component	642	1,548	42
<b>Total</b>	<b>6,889</b>	<b>5,021</b>	<b>100</b>

5) **Validated and reconciled findings.** To check consistency of data coding between coders, 10-20% of projects within each donor workbook were screened by a second coder (representing 84% of screened disbursements and 67% of all disbursements). The 10-20% of projects were selected by overall disbursement size, so that the coding of projects with the largest disbursements – and therefore the most influence on the final numbers – was verified. While re-coding the 10% of previously screened projects, second coders were blind to the first coders’ work, although they could use links to program documents identified by the first coder. The two sets of codes were then compared, with disagreements between coders reconciled through discussion; in cases in which coders could not agree, a third team member broke the tie. This secondary coding occurred throughout the screening process.

The agreement between coders is summarized by target and intervention in Tables A1.2 and A1.3. For the purposes of these tables, codes were considered to match when both coders either a) flagged one or more interventions counted towards the target/intervention category or b) flagged no interventions counted towards the target/ intervention category. The percentages shown are the percent of projects for which codes were considered to match – that is, a 90% agreement rate would indicate that coders agreed on 90% of projects screened by two coders for the specified target or intervention category.

<sup>4</sup> Please note that the structure of figure has been revised since the 2016 methods supplement for greater clarity. As a result, figures are not directly comparable. Disbursements are shown in 2016 USD.



**Table A1.2: Coder agreement rates by target (percent of twice-screened projects)**

Stunting	85%
Wasting	92%
Exclusive breastfeeding	93%
Anemia	90%
Low birthweight	98%
Overweight	99%

**Table A1.3: Coder agreement rates by intervention category (percent of twice-screened projects)**

Biofortification	100%
Diet-related NCD prevention	99%
School feeding	99%
Blanket feeding	98%
Nutrition counseling	95%
Fortification of staples	95%
Targeted feeding	94%
Breastfeeding promotion	93%
Treatment of acute malnutrition	92%
Micronutrient supplementation	91%
Coordination, governance, and advocacy for nutrition	90%
Research, knowledge management and data for decision making	88%
Systems strengthening and capacity building for nutrition	82%

- 6) **Applied assumptions for remaining projects that were not screened.** For the 19% of disbursements in the nutrition dataset that were not screened, assumptions were applied to a) remove an expected proportion of false positives from the keyword search, b) estimate the disbursement value for nutrition among purpose codes outside of basic nutrition, and c) identify which nutrition interventions were included in these disbursements.
- a) An analysis was conducted of screened projects to calculate the average percentage of the total project disbursement that was assigned to the nutrition component. This was done on a donor-by-donor basis. For unscreened transactions, this average percentage was used as the nutrition component.
  - b) Intervention codes (i.e., codes used to tell when a transaction includes a particular intervention) were applied on average across all unscreened transactions only if the interventions had been identified within the donor's screened transactions. Note that the intervention-level breakdown was estimated using the same approach as screened transactions (step 7). By doing this, this method applies the average intervention-level breakdown to all unscreened transactions, drawing on *screened* transactions on a donor-by-donor basis.
- 7) **Applied assumptions for intervention-level breakdown.** Once the interventions present within each transaction have been identified, the next task is allocating the nutrition disbursement across them.

As previously reported, we reviewed multiple approaches for a methodology to approximate how much funding is disbursed to included interventions (D'Alimonte, Mary et al. 2018). Through internal review and consultation with donors and key stakeholders, we selected the best approach to do so, while still noting that there is no perfect method to estimate intervention-level disbursement splits without granular intervention-level data.

In the selected approach, intervention weights are based on an estimate of cost drivers observed: the average value of intervention disbursements, adjusting for the number of interventions per transaction. The relative size of these weights approximates which interventions are more or less costly, based on whether they tend to be associated with larger disbursements. The underlying assumption of this approach is that interventions that appear predominantly in transactions with large disbursements relative to the number of interventions are more costly than other interventions, and likely to require a larger share of disbursement within a given transaction.

For a complete discussion of the approach, refer to the supplementary materials of the 2015 report (D'Alimonte, Mary et al. 2018).

- 8) **Calculated multilateral outflows.** Within the CRS database, double-counting between bilateral and multilateral flows is avoided as follows:
- Bilateral flows include direct aid to recipient countries plus the earmarked, non-core contributions through multilaterals. These flows are termed “bi/multi aid” and the donor/financing source is listed as the bilateral donor in the CRS dataset.
  - Multilateral flows include core funding only, so bilateral contributions to the regular core budgets would be captured here. In the CRS database, the original bilateral donor cannot be tracked because funding is not earmarked.<sup>5</sup> The donor/financing source is listed as the multilateral donor in the CRS dataset.

In order to capture total multilateral outflows to nutrition, core funding (when the multilateral is listed as the donor) is added to non-core funding (when a bilateral donor is listed as the donor but where the index multilateral is listed as the channel organization receiving the funding). Total outflows represent all financial flows for nutrition, whether they serve as a source or a channel through which funding is disbursed.

- 9) **Deflated to 2015 USD.** All disbursements in the report are shown in 2015 USD. 2016 disbursements were originally downloaded from the CRS in 2016 USD. The conversion was made using the DAC deflators provided by the OECD according to the methodology recommended there. The DAC total deflator was employed for all donors and multilaterals which lacked a specific deflator.

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<sup>5</sup> The OECD "Members' total use of the multilateral system" database provides data on bilateral contributions to multilaterals.

## Supplemental Table A: Keywords used to identify the nutrition universe

Note that keywords that are partial words will capture the full word of which they are part. For example, the “nutri” keyword will capture project descriptions containing the words “nutrition,” “acute malnutrition,” “micronutrient,” etc.

English	French	Spanish	Full words captured under the keyword
BMI		IMC	
iron	supplémentation en fer	suplementos de hierro	
anaemia			
anemia	anémie		
biofort		Bioenriquecimiento	biofortification, biofortify, biofortified
body mass index	indice de masse corporelle	índice de masa corporal	
breast-			breast-milk, breast-feed, breast-feeding
breast milk	lait maternel	leche maternal	
breastfeeding	allaitement	lactancia, amamant	amamantar, amamantamiento
breastmilk			
CMAM			
complementary food	alimentation complémentaire, aliments complémentaires	alimentación complementario, alimentos complementarios	
diet*	diversité alimentaire	Dieta	dietary diversity
fetal growth		crecimiento fetal	
folic	folique	Fólico	iron-folic acid
fortif		Enriquecimiento	fortify, fortification, fortified
golden rice	riz doré	arroz dorado	
growth monitoring			growth monitoring and promotion
HarvestPlus			
height-for	debout-pour-l'âge, debout pour l'âge, poids-pour-taille debout, poids pour taille debout, poids-taille	estatura para el peso, estatura para la edad	height-for-weight, height-for-age
high in fat	élevé de graisse	alto contenido de grasa	
infant and young child feeding	alimentation du nourrisson et du jeune enfant	alimentación del lactante y del niño pequeño	
infant growth	croissance infantile, croissance de l'enfant, croissance chez l'enfant	crecimiento infantil	
intrauterine growth restriction		restricción del crecimiento intrauterino	
iodiz	iodation du sel, sel iodé	yodación de la sal, sal yodada	iodization, iodized
IUGR	RCIU		
IYCF	ANJE	ALNP	
lactat			lactating, lactate
linear growth	croissance linéaire	crecimiento lineal	
low birth weight			
low birthweight	insuffisance pondérale	bajo peso al nacer	
low sodium	teneur en sodium	bajo contenido en sodio	
mid-upper arm circumference	circonférence du bras à mi-hauteur	perímetro braquial	
MUAC			

nourish	nourr		undernourish, well nourished, malnourish
nutri			nutrition, malnutrition, moderate/severe acute malnutrition, maternal nutrition, nutrition coordination, nutrición, micronutrient, micronutrimient, malnutrition aiguë, micronutriments en poudre, micronutrientes en polvo, conseil nutritionnel, asesoramiento nutricional, nutrition BCC, BCC for nutrition, scaling up nutrition, nutrition labelling, nutrient, gestión comunitaria de la malnutrición grave, gestión comunitaria de la malnutrición aguda grave
obesity	obésité	Obesidad	
orange fleshed sweet potato	patate douce à chair orange	camote de pulpa anaranjada, camote anaranjado	
orange-fleshed sweet potato			
overweight	surpoids	sobrepeso	
processed food	aliments transformés	comida procesada	
protein energy			
ready to use therapeutic food	aliment thérapeutique	alimentos terapéuticos listos para usar, alimentos terapéuticos listos para consumir	
ready-to-use therapeutic food			
reduce sodium	réduire le sodium	reducir sodio	
RUTF	ATPE	ATLC, ATLU	
salt intake	consommation de sel	consumo de sal	
salt reduction	réduction de sel	reducir el consumo de sal	
salty	salé	salado	
SAM treatment			
stunting	retard de croissance	retraso en talla	retard de croissance intra-utérin
sugar consumption	consommation de sucre	consumo de azúcar	
sugar-sweeten		azucaradas, azucarados	
sugary	sucré	alto contenido de azúcar	
trans fat	gras trans	grasas trans	
trans-fat			
under weight			
underweight			
under-weight			
vegetable*	légume	verdura	
vitamin			vitamin A
wasting	émaciation	emaciación	
weight-for	poids-pour-l'âge, poids pour l'âge	peso para la estatura, peso para la edad	weight-for-height, weight-for-age

\* Upon review of transactions that this keyword pulled, it was found to be likely to include false positives; recommend to not include in future screenings.

## Appendix 2: Categorization of nutrition disbursement by WHA target

This resource tracking analysis followed the Investment Framework package of interventions per target. Table A2.1 shows the list of interventions included in the framework along with the ten-year costs to scale-up the interventions to achieve the targets. Note that most intervention costs are targeted to a specific population/beneficiary group.

**Table A2.1: Ten-year total financing needs to meet all four targets, as reported by the Global Investment Framework for Nutrition (Shekar, Kakietek, et al. 2017)**

Intervention	Stunting	EBF	Anemia	Wasting	Total	Share of total costs
Prophylactic zinc supplementation for children	14,212				14,212	23%
Public provision of complementary foods for children	12,750				12,750	20%
Treatment of severe acute malnutrition for children				8,091	8,091	13%
Balanced energy-protein supplementation for pregnant women	6,949				6,949	11%
Infant and young child nutrition counseling	6,823	4,159			6,823	11%
Iron and folic acid supplementation for non-pregnant women			6,705		6,705	11%
Staple food fortification			2,443		2,443	4%
Antenatal micronutrient supplementation	2,309		2,017		2,309	4%
National breastfeeding promotion campaigns		906			906	1%
Vitamin A supplementation for children	716				716	1%
Intermittent preventive treatment of malaria for pregnant women	416		337		416	1%
Pro-breastfeeding social policies		111			111	<1%
<b>Subtotal</b>	<b>44,175</b>	<b>5,176</b>	<b>11,502</b>	<b>8,091</b>	<b>62,431</b>	<b>100%</b>
Capacity strengthening (assumed to be 9% of subtotal)	3,976	466	1,035	728	5,619	NA
Monitoring and evaluation (assumed to be 2% of subtotal)	884	104	230	162	1,249	NA
Policy development (assumed to be 1% of subtotal)	442	NA	115	81	614	NA
<b>Total</b>	<b>49,476</b>	<b>5,745</b>	<b>12,882</b>	<b>9,062</b>	<b>69,913</b>	<b>NA</b>

The overweight and low birthweight targets were not included in the Investment Framework for Nutrition, thus there is no reference package of interventions as there is for stunting, wasting, anemia, and exclusive breastfeeding from that reference.

As indicated in **Appendix 1**, this analysis used disbursement data from the Creditor Reporting System and relied on project descriptions coupled with external document review to identify *which* interventions within the framework are being funded via the basic nutrition purpose code and beyond. Disbursement data is *not* often reported by beneficiary population, and project descriptions often do not provide this information either.

Because most cost categories in the Investment Framework for Nutrition are tied to a specific target population (e.g., public provision of complementary foods for children), it is not possible to match exact disbursements to each cost category from the data available.

Instead, this analysis captured total project/program disbursements. No attempt was made to discount total project/program disbursements by beneficiary, since it would distort the full picture of funding because it would have to rely on assumptions of beneficiaries reached. This was discussed during initial stakeholder consultation with general agreement, with the aim to end up with a fuller picture of total disbursements.

Table A2.2 shows the nutrition taxonomy used to roll up investments to the WHA targets. In the qualitative screening process described in **Appendix 1**, researchers screened transactions to identify when nutrition-specific interventions were present and coded them using the list shown as “nutrition intervention (level 3)” in Table A.2.2. Transaction disbursements were then allocated across the indicated interventions. A

The ‘NOTES’ section that follows reports considerations for each target with regards to the screening process.

**Table A2.2: Nutrition intervention taxonomy for WHA target roll-up**

Nutrition Program Area (level 1)	Nutrition Intervention Category (level 2)	Nutrition Intervention (level 3)	Stunting	Wasting	Anemia	EBF	Over-weight	Low birth weight	Not assigned to any one target
<b>Treatment of acute malnutrition</b>	Treatment of acute malnutrition	Treatment of acute malnutrition		X					
<b>Fortification of staples</b>	Fortification of staples	Fortification of staples			X				
<b>Micronutrient supplementation</b>	Micronutrient supplementation	Multiple micronutrient powder (point-of-use fortification)	X		X				
		Iron and folic acid supplementation	X		X				
		Vitamin A supplementation	X						
		Zinc and/or ORS for diarrhea management	X						
		Multiple micronutrients supplementation	X		X			X	
<b>Behavior change communication for nutrition</b>	Nutrition counseling	Nutrition counseling	X						
	Breastfeeding promotion	Breastfeeding promotion	X			X			
<b>Diet-related non-communicable disease (NCD) prevention</b>	Diet-related NCD prevention	Diet-related NCD prevention					X		
<b>Above service delivery</b>	Coordination, governance, and	Advocacy for nutrition							X

	advocacy for nutrition	Workshops and conferences							X	
		Nutrition policy making and priority setting							X	
	Capacity building	Nutrition trainings and capacity building							X	
	Research and data	Nutrition research and development							X	
		Evaluation of nutrition programs (M&E) distinct from within programs							X	
<b>Other investments in the basic nutrition code, not aligned with GIFN</b>	Direct feeding programs	Direct feeding programs	Partly - can't disaggregate by beneficiary						X	
	School feeding	School feeding							X	
	Biofortification	Biofortification							X	
	Salt iodization	Salt iodization							X	
	Food safety	Food safety							X	
	Income generation	Income generation							X	
	Nutrition delivered through infectious disease control programs	Deworming								X
		All else								X
	Social protection	Nutrition and cash transfer							X	
	Women's empowerment & nutrition	Women's empowerment & nutrition							X	



## NOTES:

### Stunting:

- The Global Investment Framework includes costs for the “public provision of complementary foods for children,” and while we could capture disbursements to direct feeding programs, we were unable to determine how much goes to children to align with costs. Because direct feeding disbursements represent large sums of disbursements, they were categorized as “other” and not rolled up to the WHA targets, **except** when they explicitly mention targeting acute malnutrition (see wasting, below).
- We did not find disbursements specifically for “balanced energy-protein supplementation.” This may be because this intervention is not invested in by donors or because this term is not used regularly during reporting to the CRS. If the latter, these investments may be included under direct feeding program disbursements if targeted to pregnant and lactating women (though that level of disaggregation is also unavailable).
- Multiple micronutrient powders (MNPs) were not directly included in the package of interventions to achieve the stunting target. Rather, MNPs were costed as the delivery platform for the scale-up of zinc prophylaxis because no other delivery platform existed for zinc intervention. Because MNPs typically include zinc, and because MNPs were costed as the delivery platform for zinc intervention, we have counted funding for MNPs towards the costs of scaling up zinc prophylaxis under the stunting target, as shown in Table A2.1.

### Wasting:

- Food aid projects that explicitly mention targeting of acute malnutrition or therapeutic foods were included under the wasting target.
- Community-based management of acute malnutrition (CMAM) programs often include components of nutrition counseling, micronutrient supplementation, or other nutrition-specific interventions to treat malnourished children. In the analysis, for transactions that include treatment of acute malnutrition along with other interventions, the disbursement value was split across interventions so that what is rolled-up to the wasting target is a fraction of the total disbursement (depending on what else was identified and assumptions on the breakdown, as reported in **Appendix 3**). Based on consultation with stakeholders, it was decided that the estimate of core treatment costs should be rolled-up to the wasting target, as opposed to the more holistic set of program delivery costs including investments in components like nutrition counseling. As such, only the estimate of treatment costs are rolled up to the wasting target.

### Anemia:

- MNPs were considered for inclusion in the anemia intervention package because they have similar effects as those of multiple micronutrient supplementation. However, they were not costed because at the time of the Investment Framework for Nutrition publication they were not yet recommended by the World Health Organization (WHO) for full scale-up. WHO guidelines have since been established (WHO 2016). We have thus counted funding for MNPs towards costs of scaling up multiple micronutrient supplementation under the anemia target, as shown in Table A2.1.

**Exclusive breastfeeding:**

- Transactions were coded as a breastfeeding intervention when there was explicit mention of breastfeeding; transactions could have also been coded as nutrition counseling.
- For transactions that were coded as nutrition counseling,

**Overweight:**

- The overweight target was not included in the Global Investment Framework for Nutrition, thus there is no reference package of interventions as there is for stunting, wasting, anemia, and exclusive breastfeeding from that reference.
- Nonetheless, this analysis captured some investments on prevention of overweight via “diet-related NCD prevention”
- Investments in research towards diet-related NCD prevention with explicit mention of overweight/obesity were found, but as these were included under the ‘research and data’ category (which is not further disaggregated), they were **not** rolled-up to the overweight category.
- It should be noted that any *domestic investment* in overweight/obesity reduction and prevention by donors (e.g., for research or programming within DAC donor countries) fit within the spirit of the global target, but are not reported as development assistance to the DAC. We expect domestic investments to be significant, however, there is currently limited/no data to account for these investments.

**Low birthweight:**

- The low birthweight target was not included in the Global Investment Framework for Nutrition, thus there is no reference package of interventions as there is for stunting, wasting, anemia, and exclusive breastfeeding from that reference.
- A 2017 systematic review points towards multiple micronutrient supplementation during pregnancy as the main nutrition-specific intervention to reduce the risk of low birthweight (da Silva Lopes et al. 2017). Because we are generally unable to disaggregate data by target population (e.g., by pregnant women), we included total disbursements for multiple micronutrient supplementation towards the low birthweight target.

**Above-service delivery (ASD):**

- These disbursements help support the scale-up of proven interventions.
- The ‘research and data’ (R&D) category currently includes all research on nutrition – if these disbursements were included in the basic nutrition code in the CRS, we did not discriminate between R&D on interventions included in the Global Investment Framework or not included, in line with the Catalyzing Progress ideology that suggests that investments in R&D/implementation science in general are important for the WHA targets (Shekar, Jakub, et al. 2017). As it stands, we have not disaggregated the R&D category, but worth noting it could include a range of topics including diet-related NCD prevention, gut biomes, and biofortification.

- There are two types of ASD investments:
  - i. **Standalone ASD disbursements** (e.g., research projects). These disbursements are reported directly.
  - ii. **ASD disbursements as part of programmatic delivery** (e.g., monitoring and evaluation of a program). Here, we did not find reliable data to estimate the percent of total disbursement going to above-service costs versus program costs. For transactions that included both program delivery and ASD investments (e.g. M&E delivered alongside a CMAM program), we did not attempt to disaggregate the ASD component given data limitations; so, these disbursements are nested within their respective pragmatic categories. Further research is needed to determine the share of overall projects going to above-service delivery costs.

Both types of investments were identified in this analysis. Of all transactions where any above-service delivery component was identified, about 67% of transactions screened were standalone and 33% were part of programmatic delivery (by count).
- Table A2.3 shows each above-service delivery intervention category (rows of the table), the frequency where these were identified within programmatic delivery (shown as a percentage), the total disbursement value of the WHA nutrition component of the transaction, and the type of programmatic intervention it was identified with (percentage of transactions that also include any of the twelve programmatic categories shown). For example, for all transactions where an ‘advocacy’ investment was identified, 35% were identified together with programmatic delivery of some kind (representing a total disbursement of \$106 million to the WHA targets). The columns with grey headers display which programmatic interventions were identified along with ‘advocacy’—e.g., 23% of programmatic interventions flagged along with advocacy were ‘treatment of acute malnutrition’, 10% within ‘breastfeeding’, etc.

Table A2.3: The amount of ASD disbursements identified as part of programmatic delivery

ASD Intervention category	Percentage of transactions where ASD disbursements are part of programmatic delivery (i.e., non-standalone)	Value of screened transactions going to WHA nutrition targets where ASD disbursements are part of programmatic delivery (i.e., non-standalone), (2015 USD millions)	Intervention the ASD category was identified in (Percent of all programmatic interventions flagged along with specified ASD intervention accounted for by specified programmatic intervention)										
			Treatment of acute malnutrition	Breastfeeding	Diet NCDs	IFA	Nutrition counseling	Micronutrients, unspecified	Multiple micronutrient supplementation	Multiple micronutrient powders	Staple fortification	Vitamin A	Zinc
Advocacy	35%	\$106.33	23%	10%	0%	8%	35%	2%	1%	6%	2%	7%	4%
Governance	33%	\$55.68	26%	10%	0%	10%	30%	4%	0%	7%	3%	8%	3%
M&E	38%	\$77.20	27%	13%	0%	15%	15%	4%	0%	8%	4%	10%	4%
Research and data	7%	\$25.97	8%	17%	0%	25%	8%	8%	0%	8%	0%	25%	0%
Systems and capacity building	42%	\$256.29	19%	17%	0%	8%	34%	8%	1%	3%	1%	6%	2%

**Other in the basic nutrition code:**

- These categories represent other disbursements found within basic nutrition that do not align with the Global Investment Framework for Nutrition package. This assessment **does not** represent a comprehensive screening across the entire CRS for these program categories. For example, there may be additional disbursements to school feeding programs coded under education purpose codes that were not captured here.

## Appendix 3: Estimating uncertainty ranges

As laid out in Appendix 1 and Appendix 2, the level of data available in the CRS requires numerous assumptions to be made to estimate the disbursements to the WHA targets. We have made an effort to quantify the uncertainty on both point estimates of and the year-to-year changes in disbursements, with the goal of clarifying the significance of our results.

The first type of uncertainty calculated was the **uncertainty on point estimates of disbursements**, or, put another way, the range of estimates that would be plausible given the data available. For instance, in 2016, the best estimate for the total Framework-aligned disbursement was \$1.13 billion, with a potential range of \$0.91 billion to \$1.32 billion.

Several sources of potential variance from the best estimates were considered in the calculation of uncertainty ranges:

- **Upper and lower estimates for nutrition component of transactions.** As described in part 4b of Appendix 1, reviewers provided an upper and a lower range for the nutrition component of each transaction. While the best estimates used the midpoint of that range for each transaction, scenarios using the upper and lower values were generated as well.
- **Method of disaggregating disbursements across interventions.** As described in step 7 of Appendix 1, a set of assumptions was applied to allocate transactions' disbursements across the interventions flagged within them. Different sets of assumptions yield different results. As previously discussed, three different approaches were applied to the 2015 data. The size of the uncertainty range for 2015 data was assumed to apply also to 2016 data, with the assumption that due to their general similarity of the 2015 and 2016 datasets the results would not differ significantly.
- **Subjectivity of reviewer inputs.** The screening process involves transaction-by-transaction review of descriptive information and program documents to determine nutrition component and interventions present. While the screening process has been designed to maximize reviewer consistency, e.g. through identical training and iterative review, discrepancies between reviewers remain. The potential size of the effect of the difference between groups of reviewers was estimated by matching transactions between 2015 and 2016 data. Because donors frequently invest in multi-year projects, it is possible to identify transactions that fund the same project across years. Barring changes to the project, those transactions should be coded identically. To evaluate the effect of reviewer inputs, the 2016 reviewer inputs (i.e. nutrition component and interventions present) were substituted into the matched 2015 transactions. The percentage difference in disbursements (for all Framework-aligned disbursements and to each of the targets) between the results using the 2016 versus the 2015 reviewer inputs was taken as a proxy for the general effect of the subjectivity of reviewer inputs.

These three sources of uncertainty were combined to determine the plausible ranges for Framework-aligned disbursements in 2015 and 2016 at the global, donor, multilateral, and recipient levels. Each of the three forms of uncertainty was calculated as a difference from the best estimate (e.g. up to \$50 million lower than best estimate, and up to \$75 million greater than best estimate). For 2016 values, the three upward ranges were added directly to achieve the total upward range, and the three downward ranges were added directly to achieve the total downward range. For 2015 values and 2015-2016

averages for donors, multilaterals, and recipients, the uncertainty from subjectivity of reviewer inputs was simply added to the previously reported uncertainty range, as that range had already incorporated the other two sources of uncertainty.

### **Uncertainty on the change in disbursements between 2015 and 2016**

Just as there is uncertainty on point estimates for total Framework-aligned disbursements and for disbursements to each of the targets, there is also uncertainty in the *change* in these values between years. For instance, the best estimate might say that the disbursement to a certain target increased by 10% between years, but an increase as low as 2% or as high as 18% might also be plausible.

However, the potential sources of uncertainty are not the same as for point estimates. Where all potential causes of variation from the true value matter for uncertainty on point estimates, uncertainty on the difference *between* estimates need only take into account factors that could affect the two estimates differently. For that reason, the only source of variance taken into account for uncertainty on change between estimates is subjectivity of reviewer inputs—something which could conceivably skew results in different directions each year, as different reviewers face different data. The other two sources of potential variance, however, seem likely to affect each year's data, but to affect them all in the same way. For instance, the method of disaggregating disbursements across interventions certainly affects the findings for both 2015 and 2016, but however it skews those findings, it is likely to skew both years' in the same direction with similar magnitude. As a result, it is not likely to affect the *difference* between the two years' findings.

With this logic, the uncertainty on the change between 2015 and 2016 results was calculated based on the subjectivity of reviewer inputs in the total, as approximated through the process of matching transactions between the two years, described above. That percentage difference was then subtracted from the observed difference between years to generate a one-sided uncertainty range. For instance, imagine the matched transaction exercise indicated that the change in reviewer inputs alone could account for a 5% increase in Framework-aligned disbursements. If the actual observed increase had been 8%, then, subtracting the 5%, an increase as low as 3% would also be plausible. If instead a decrease of 8% had been observed, subtracting the same 5% would indicate that a decrease of 13% could be plausible.

This approach was applied to results for the Framework-aligned total disbursement and disbursements to each target, as well as results at the global, donor, multilateral, and recipient levels. Where the plausible range was solidly below 0%, the change was interpreted as a decrease. Where the plausible range was solidly above 0%, the change was interpreted as an increase. Where the range included 0% or was within 1-2% of 0%, the change was interpreted as equal/increase or equal/decrease, depending on the value of the best estimate.

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