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# Rwanda Nutrition Expenditure and Institutional Review 2020

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# Acronyms

AEFI	Adverse Events Following Immunization	LODA	Local Administrative Entities Development Agency
ASRH	Adolescent Sexual and Reproductive Health	M&E	Monitoring and Evaluation
CBEHPP	Community Based Environmental Health Promotion Program	MCH	Maternal and Child Nutrition
CBP	Community-Based Programs	MDA	Mass Drug Administration
CCM	Community Case Management	MG	Magnesium
CEmONC	Comprehensive Emergency Obstetric and Newborn Care	MIDIMAR	Ministry of Disaster Management and Refugee Affairs
CHWs	Community Health Workers	MIGEPROF	Ministry of Gender and Family Promotion
CIFF	Children's Investment Fund Foundation	MINAGRI	Ministry of Agriculture and Animal Resources
CMEP	Comprehensive Monitoring & Evaluation Plan	MINAGRI	Ministry of Agriculture and the Rwanda Agriculture Board
CRVS	Civil Registration and Vital Statistics	MINALOC	Ministry of Local Government
CSB	Corn-Soy Blend	MINECOFIN	Ministry of Finance and Economic Planning
CSOs	Civil Society Organizations	MINEDU	Ministry of Education
DFID	Development for International Development	MININFRA	Ministry of Infrastructure
DHS	Demographic and Health Survey	MINISANTE MOH	Ministry of Health
DPEM	District Plan to Eliminate Malnutrition	MINYOUTH	Ministry of Youth
ECCD	Early Childhood Care and Development	MIYCN	Maternal, Infant, and Young Child Nutrition
ECD	Early Childhood Development	MNCH	Maternal, Newborn, and Child Health
ECOWAS	Economic Community of West African States	MUAC	Mid-Upper Arm Circumference
EmONC	Emergency Obstetric and Newborn Care	NECDP	National Early Childhood Development Program
EPI	Expanded Program on Immunization	NGOs	Non-Governmental Organizations
FAO	Food and Agriculture Organization	NNTF	National Nutrition Task Force
FBF	Fortified Blended Food	NSP	National Strategic Plan
FMIS	Financial Management Information System	NTD	Neglected Tropical Diseases
FP	Family Planning	NWC	National Women's Council
FXB Rwanda	François-Xavier Bagnoud Rwanda (NGO)	OM-SPAN	Online Monitoring System of the Financial Management Information System
FY	Fiscal Year	ORS	Oral Rehydration Salts
GAVI	Global Alliance for Vaccines and Immunizations	PFM	Public Financing Management

GBV	Gender-Based Violence	PPFP	Postpartum family planning
GFF	Global Financing Facility	QA	Quality Assurance
GGE	General Government Expenditures	QC	Quality Control
GHE	Government Health Expenditure	RAB	Rwanda Agriculture Board
GOR	Government of Rwanda	RBC	Rwanda Biomedical Center
HA	Health Accounts	RMNCAH	Reproductive, Maternal, Newborn, Child and Adolescent Health
HMIS	Health Management Information System	RUTF	Ready-to-use Therapeutic Foods
ICT	Information and Communication Technology	RWF	Rwandan Francs
IEC	Information Education Communication	SAM	Severe Acute Malnutrition
IECD	Integrated Early Childhood Development	SBCC	Social and Behavior Change Communication
IFA	Iron and Folic Acid	SHA	Systems of Health Accounts
IFAS	Iron and Folic Acid Supplement	SMART	Integrated Monitoring and Evaluation System in Indonesia
IMCI	Integrated Management of Childhood Illness	SPA	Single Plan Action
IRS	Indoor Residual Spraying	SPRP	Stunting Prevention and Reduction Project
IUD	Intrauterine Device	STIs	Sexually transmitted infections
IYCF	Infant and Youth Child Feeding	StraNas	National Program to Accelerate Stunting Reduction
IYCN	Infant and Young Child Nutrition	SUN	Scaling Up Nutrition
JAPEM	Joint Action Plan to Eliminate Malnutrition	TVET	Technical and Vocational Education and Training
KAP	Knowledge Attitude and Practices	VPD	Vaccine Preventable Diseases
KRISNA	Collaborative Planning and Budget Performance Information in Indonesia	VUP	Vision Umurenge Program
LGAs	Local Government Authority	WASAC	Water and Sanitation Corporation
LiST	Lives Saved Tool	WASH	Water, Sanitation, and Hygiene
LLIN	Long-Lasting Insecticide Treated Bed Nets	WDI	World Development Indicators

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# Executive Summary

**Rwanda has made significant gains in improving the health and nutrition status of its population, but it still faces many challenges.** Stunting has declined among children under the age of 5 from 51 percent (DHS 2005) to 38 percent (DHS 2014/15). This is still higher than in Rwanda's neighboring countries Tanzania (34.4 percent) and Uganda (33.4 percent), and relative to countries at a similar socioeconomic level to Rwanda such as Zimbabwe (26.8 percent). In some districts, the prevalence of stunting exceeds 40 percent, and households in rural areas and poor households have seen only a modest reduction since 2005. Even among the top two wealth quintiles, 25 percent of children are stunted, which highlights the cumulative impact that inadequate food intake, poor health conditions, and endemic poverty can have on stunting levels across wealth quintiles.

**Undernutrition comes at a significant cost.** According to the *2012 Cost of Hunger in Africa* study, an estimated 49.2 percent (3 million) of Rwanda's working-age population suffered from stunting as children. This has resulted in an estimated 794 million RWF of lost productivity on the labor market due to the population's lower educational status and over 300 billion RWF cost due to 922 million working hours lost due to nutrition-related morbidity and mortality. This amounts to an estimated loss of 11.5 percent of GDP.

**It is crucial to track the amount of public financing spent on nutrition-related interventions to ensure that existing funding is being spent efficiently and in line with the government's defined priority areas.** Tracking nutrition expenditures is particularly complex because nutrition outcomes are influenced by a variety of different ministries, and it is difficult to identify spending items such as wages and salaries dedicated to nutrition activities or specific infrastructure investments. Further, some spending items are coded in broad terms (e.g. mental health instead of maternal mental health, insemination of cows, and Vision 2020 Umurenge Program support) and were thus excluded, which invariably will underestimate actual contributions. There is also no standardized methodology for tracking these expenditures and existing methodologies differ in terms of how much disaggregation of budget data is needed, whether they use international or national classifications of interventions, and how they use weighting to apportion spending to the nutrition classification. This complicates international comparisons across indicators, especially for nutrition sensitive spending and any comparisons should be interpreted with care.

**This nutrition expenditure and institutional review for Rwanda has two objectives:** (i) to analyze the level and composition of government and donor spending on nutrition in the context of early child development over the fiscal years 2015/16 to 2017/18; and (ii) provide recommendations to strengthen institutions and public financial management arrangements to better serve nutrition needs. This report also contributes to the methodological discourse on nutrition expenditure tracking and is the first to assess the responsiveness of the public financial management system.

**Public spending on nutrition has grown rapidly, which shows strong government commitment.** Despite a large donor presence, the Rwandan government makes up an increasingly important share of total nutrition spending. The Rwandan government share of total nutrition spending has increased from 69 percent in 2015/16 to 83 percent in 2017/18. During this time period, government spending on nutrition has increased by 27 percent from RWF 1,720bn to RWF 2,189bn. In 2017/18, the government allocated 2.5 percent of the total budget to nutrition. While this is promising, it remains insufficient especially given Rwanda's level of GDP and high stunting rate. Other countries such as Tanzania, Indonesia and Bhutan have spent a greater share of their budget on nutrition-related activities at 3.8, 2.6, and 3.0 percent respectively.

**Nutrition spending is dominated by nutrition-sensitive interventions.** Total unweighted nutrition spending is estimated at US\$ 36 per child. Nutrition-specific investments amounted to about US\$6 per child, which is significantly less than the US\$10 estimated to be necessary for a comprehensive set of nutrition-specific interventions. Fortified-blended food and malaria interventions make up almost all nutrition-specific spending (92 percent). Support for

other high-impact interventions such as behavior change activities remains limited. The largest proportion of nutrition-sensitive spending consists of interventions supporting the provision of safe drinking water, the delivery of milk, school feeding initiatives, and the Girinka heifer program. Spending on these items has increased since 2016, whereas support for activities such as immunization and food security has been considerably reduced. Enabling environment activities remain underfunded. This is despite the urgent need to strengthen evidence-based decision making, coordination, and financial management capacity.

**There is scope to shift spending toward high-impact interventions for greater value for money.** Shekar et al (2017) estimated that the most cost-effective interventions for stunting reduction are vitamin A supplementation in pregnancy, and infant and young child feeding (IYCF) nutrition counseling. However, the Rwandan government only spent RWF 713 million in 2015/16 on these kinds of activities and discontinued them thereafter. This may be a reflection of the high complementarity between donor and government engagement. Between 2015 and 2018, the government spent about RWF 364 million on high-impact behavior change interventions, or 1.8 percent of total nutrition-specific spending across the three fiscal years. Modelling various spending scenarios shows that nutrition outcomes could be significantly improved by investing in infant and young children feeding and micronutrient powders interventions, which are also low-cost interventions. Scenarios predict that this would result in 2 percent fewer stunted children, 16 percent fewer anemic children, 4 percent fewer maternal deaths, and 27 percent fewer anemic women. Other measures could be taken to address stunting directly, though they may not be budget neutral.

**An allocative efficiency analysis is not possible due to insufficiently granular government expenditure reporting.** Government expenditure reports do not clearly identify specific high-impact interventions. For example, expenditure reports are grouping curative commodities for management of acute malnutrition with the prevention and management of micronutrient deficiencies. These should be explicitly specified during planning, budgeting, tracking and reporting processes in order to inform effective and evidence-based decisions.

**Nutrition-sensitive interventions are implemented by many government agencies, which makes oversight and coordination difficult.** The vast majority of nutrition-specific activities are health interventions implemented by the RBC. Nutrition-sensitive activities on the other hand are implemented by many ministries and agencies, which makes it challenging for the National Early Childhood Development Program (NECDP) to oversee and coordinate these activities, especially since agencies are not required to produce dedicated nutrition budgets or spending reports.

**The nutrition policy environment could be strengthened.** The policy documents do not clarify institutional arrangements or make it clear what nutrition activities should be prioritized by whom, and what indicators and targets should be used to measure progress. While no cost estimates of the NECDP's Strategic Plan (or a package of priority interventions) were available at the time of publication of this report, costing work is currently ongoing which should provide additional clarity on the financing gap and responsibilities among financing partners.

**Decentralized administrative entities (districts, sectors, and cells) play a critical role in ensuring national priorities are translated into action on the ground.** Detailed district plans to eliminate malnutrition have been established with various efforts to strengthen coordination at the district level. However, the role of administrative entities in coordinating, implementing, and monitoring nutrition activities is not formalized, and there is limited planning and budgeting capacity. Arrangements for decentralization vary by sector, and roles and responsibilities amongst actors at decentralized levels are sometimes unclear, leading to overlapping functions with limited accountability mechanisms. District capacity for coordination and oversight is also undermined by insufficient budget provisions. Plans are in place to establish a human development officer at the cell level, which would alleviate some of these bottlenecks.

**To effectively manage and coordinate nutrition expenditures, a nutrition-responsive public financial management (PFM) system is needed.** The current PFM environment does not currently provide this, which inhibits NECDP's stewardship function. A set of reforms are needed to develop a government-wide approach to effective management. Firstly, an essential package of priority high-impact activities in the strategy need to be identified and costed. This should clarify which agencies in government should take what responsibilities, and related activities should be explicitly included in subsequent budget proposals. Nutrition-related activities should be explicitly tagged during the budget formulation processes, based on guidance provided by NECDP and MINECOFIN. Through this, a government-wide nutrition budget across all ministries and agencies can be drawn that provides a basis for how targets in the nutrition strategy will be pursued. The Government's Financial Management Information System (FMIS) will need to be customized to allow adequate access to NECDP such that it can monitor actual nutrition-related spending across all ministries and agencies. This will allow NECDP to understand what activities in the budget across all agencies have been financed and completed, what activities are ongoing, and what remains to be done and associated cash flow requirements. Financing information can eventually be associated with outcome information to inform on the effectiveness of programs and allow for evidence-based spending adjustments. Nutrition execution reports can then be generated to reflect on spending against budget allocations and outcomes. This can provide for an effective monitoring mechanism against implementation of the strategy.

**Development partner spending is fragmented and limited.** Total donor support makes up a relatively small and declining share of total nutrition spending. Three development partners (the US, the Netherlands, and the UK governments) make up almost 80 percent of total donor spending on nutrition, but the Rwandan government has to coordinate a total of 23 different partners, which is costly and challenging process. Donor spending has shifted toward nutrition-sensitive activities, and development partners have scaled back their enabling environment investments considerably. Donors should aim to increasingly align with the nutrition responsive budget to ensure alignment of priorities, minimize fragmentation, and facilitate comprehensive budget execution reports.

**This report provides recommendations to further develop the methodology for nutrition expenditure analysis.** This report carefully reviewed all available nutrition expenditure analyses available and drew methodological conclusions. Findings include a need for a standardized way of classifying nutrition-related spending to be applied, of which the 2013 Lancet Framework lends itself well. Government spending should be mapped against this framework to the extent possible. Government expenditure data as available from the FMIS should be used. Coding for nutrition should be done against activity descriptions in the budget. Merely looking at spending agencies or programs/subprograms is unlikely to be sufficiently precise to be helpful for an analysis, and should only be used if the former not be available. Weighting nutrition spending tends to be subjective and should not be used for comparison. It is important to consider the adequacy of the institutional and public financial management environment. This can provide for actionable recommendations on how to improve the management of nutrition across governments, strengthen accountability, and help adjust spending toward high impact interventions. Optima can be used to inform allocative efficiency. It should however be interpreted with care if the unit cost estimates cannot be fully derived from Government and donor expenditure reports of all high impact interventions.



# 1. Introduction

## 1.1 Tackling the Challenge of Malnutrition in Rwanda

**Rwanda is a low-income country with consistently high economic growth.** With growth at about 6 to 9 percent per year, the size of the economy is expected to double within a decade. Government revenue collection is relatively high, reaching 19.4 percent of GDP in 2019, and is considerably higher than in Rwanda's regional peers (Tanzania and Uganda) where governments collect about 15 percent of GDP. Since 2015 Government revenue has increased in nominal terms by about 14 percent per year.<sup>1</sup>

**Rwanda has achieved significant gains in improving the health and nutrition status of its population.** Rwanda's Vision 2020 aims to "transform Rwanda into a middle-income country in which Rwandans are healthier, educated, and generally more prosperous" (Republic of Rwanda, 2012). In line with this vision, Rwanda has met or exceeded most of the Millennium Development Goal targets. Infant and under-5 mortality rates have decreased, and stunting rates have declined for children under the age of 5 (Table 1). Deliveries in health facilities rapidly increased from 28 percent in 2005 to 91 percent in 2015, with high coverage across all wealth quintiles.<sup>2</sup> The rate of exclusive breastfeeding for infants is well over 80 percent. These gains coincided with improvements in care practices, such as the coverage of antenatal care, facility deliveries, and postnatal practices (World Development Indicators, 2020).

**TABLE 1: MATERNAL, NEONATAL, AND CHILD HEALTH INDICATORS, 2005 - 2015**

Indicator	Rwanda		Lower-income Countries		Sub-Saharan Africa	
	2005	2015	2005	2015	2005	2015
Neonatal mortality per 1,000 live births	37	20	36	28.1	36	29.3
Infant mortality per 1,000 live births	86	32	73.2	52.3	77.8	56.8
Under-5 mortality per 1,000 live births	152	50	115.2	75.5	125.4	84.8
Stunting, % of children under 5	51.1	37.9	43.4	36.5	40.4	35.1

Source: World Development Indicators

**Despite these recent advances, chronic malnutrition and hunger remain severe.** In 2015, Rwanda had a higher stunting prevalence (38 percent) than its low-income and Sub-Saharan peers (Table 1). Rwanda's stunting rates are also higher than in their neighboring countries including Tanzania (34.4 percent) and Uganda (33.4 percent) or in countries at a similar socioeconomic level to Rwanda such as Zimbabwe (26.8 percent). Stunting prevalence is the highest among the poorest households (over 50 percent) and those living in rural areas (over 40 percent). They have seen only a modest reduction in stunting prevalence since 2005. Even among the top two wealth quintiles, a quarter of children are stunted. Food intake is affected by seasonal and climate shocks, as 27 percent of all households regularly experience drought, irregular rains, and prolonged dry spells that negatively affect their ability

<sup>1</sup> IMF (2020).

<sup>2</sup> Mkrtychyan et al (2018).

to access and eat enough food. According to the 2019 Global Hunger Index,<sup>3</sup> Rwanda was categorized as having a severe level of hunger based on a composite measure of undernourishment, child wasting, child stunting, and child mortality.<sup>4</sup>

**Access to nutrition-specific and nutrition-sensitive services is uneven.** Between 2010 and 2015, only 18 percent of children aged between 6 and 24 months old had a minimum acceptable diet, while fewer than 50 percent had the minimum meal frequency, and only 29 percent had the minimum dietary diversity, which increases the risk of micronutrient deficiencies. About 59 percent of women report difficulties in accessing healthcare and proper sanitation, only 44 percent attend four or more antenatal care visits, and only 3 percent take iron folic tablets for at least 90 days of their pregnancy. Among poor households, 91 percent have no access to a handwashing station and 60 percent do not treat water before drinking it. Poor water, sanitation, and hygiene practices can expose people to parasitic and enteric pathogens, which prevent the absorption of nutrients in children.<sup>5</sup>

**Malnutrition have negative effects on health and education outcomes as well as on future productivity.** Malnourished children are more likely to fall sick from goiters, gum and eye diseases, anemia and other nutrition-related diseases that require outpatient care or hospitalization. Stunted children have a 12.7 percent higher rate of grade repetition than non-stunted children and are more likely to drop out of school, which will affect their participation in the labor market. Nutrition-related illnesses contribute to high rates of absenteeism from the workforce. As a result, malnutrition and related diseases have cost implications not only for the health sector but also for the broader economy.

**The cost of undernutrition in Rwanda has been estimated at 11.5 percent of GDP annually (504 billion RWF).** The 2012 Cost of Hunger in Africa study, conducted by the African Union Commission, estimated the cost of the social and economic impact of undernutrition in children under the age of 5 by analyzing morbidity, mortality, school repetition, school dropouts, and reduced physical capacity. The study found that 49.2 percent (3 million) of Rwanda's working-age population between the ages of 15 and 64 had suffered from stunting as children. Undernutrition was associated with 21.9 percent of all child mortalities, which represented over 121,023 deaths between 1998 and 2007, decreasing the current adult workforce by 9.4 percent.<sup>6</sup> Malnutrition leads to grade repetition, which is associated with a 2.37 million RWF cost to the education system, private costs of 794 million RWF of lost productivity in the labor market due to low educational attainment, and 309 billion RWF in over 922 million working hours lost due to nutrition-related morbidity and mortality. This is estimated to result in a loss of 11 percent of GDP annually.<sup>7</sup>

**Addressing the challenge of malnutrition will be complex and will require coordination and accountability across sectors.** Rwanda's National Early Childhood Development Program (NECDP) coordinates all nutrition activities, that are implemented by many different line ministries, including health, education, water and sanitation, and agriculture. Early childhood development (ECD), encompassing the prenatal stage up to 8 years of age, and provides a critical window of opportunity to invest in nutrition and in a child's long-term physical and mental wellbeing.<sup>6</sup> This window is time-sensitive, as the cumulative impact of stunting is largely irreversible and can result in a cascade of intergenerational effects, negatively impacting health, cognitive and motor development, educational attainment, and economic status throughout the entire life course and beyond. Therefore, streamlining and coordinating the delivery of high-impact nutrition services will have a long-term, positive impact on building human capital in Rwanda.

<sup>3</sup> The Global Hunger Index is a peer-reviewed annual report jointly published by Concern Worldwide and Welthungerhilfe, that aims to measure and track hunger at the global and national levels. The Index is calculated annually, and each country is ranked and given a score based on a composite score from four indicators: undernourishment, child wasting, child stunting, and child mortality.

<sup>4</sup> Global Hunger Index 2019: Rwanda. Retrieved from <https://www.globalhungerindex.org/pdf/en/2019/Rwanda.pdf>

<sup>5</sup> Mkrtychyan et al (2018).

<sup>6</sup> NEPAD et al (2012).

<sup>7</sup> NEPAD et al (2012).

**The objective of this nutrition expenditure review is twofold.** First, it analyzes the financing of nutrition-specific and related interventions in the context of ECD, and second, it contributes to the development of a methodology to monitor and evaluate nutrition expenditures across sectors. The review generates a baseline on actual expenditures for nutrition interventions. It assesses the level and composition of public expenditure and off-budget expenditure by development partners on nutrition over the fiscal years from 2015/16 to 2017/18), summarizes lessons from methodologies used by other countries, and describes the approach taken in this analysis. The study also reviews institutional arrangements and the responsiveness of public financial management systems for nutrition needs.

## 1.2 Why Track Nutrition-Related Expenditures?

**The Government of Rwanda needs information on how to reach its strategic goal of “reducing the prevalence of stunting to 19 percent by 2024.”** The government aims to track financing for nutrition-related interventions to ensure that current spending is efficient and in line with its priorities. Rwanda’s health sector strongly relies on development partners for funding. Roughly 60 percent of total spending on health is from external sources.<sup>8</sup> However, little is known about: (i) how much the government and development partners each contribute to nutrition-related expenditures; (ii) whether the current resources are being allocated to priority interventions to reduce stunting; and (iii) what additional funds will be needed to reduce the average stunting rate among children under 5 years from 38 percent in 2014 to 19 percent by 2024 in line with the 2018-2024 Health Strategic Plan.<sup>9</sup>

**Having more information will help to target funding to high-impact interventions.** Currently, various activities to improve nutrition outcomes are carried out by different government entities in Rwanda including the health, education, social protection, water and sanitation, and agriculture sectors; and coordinated by NECDP. Tracking these nutrition-related expenditures is complex. Therefore, policymakers need reliable data in order to allocate resources to those interventions with the greatest potential impact.

**Rwanda’s National Early Childhood Development Program coordinates all nutrition activities.** The NECDP operates under the Ministry of Gender and Family Promotion and is responsible for the coordination, monitoring, and evaluation of all activities that support adequate early childhood development for children under 6 years of age, including nutrition-related activities. Because the NECDP works in close collaboration with all social cluster sectors, there needs to be adequate public financial management (PFM) processes in place to allow monitoring of actual expenditures across all institutions and agencies, and all levels of government on nutrition-related activities.

**A standardized methodology for tracking nutrition expenditures is needed to generate reliable and comparable information for governments.** There is no commonly accepted methodology for identifying and analyzing nutrition expenditures. In 2014/15, the Rwandan Ministry of Health (MOH) conducted a Health Resource Tracking Output Report to monitor health and nutrition expenditures in the health sector funded by the government and development partners.<sup>10</sup> The World Bank then conducted a follow-up study to map all nutrition-specific and nutrition-sensitive interventions and their funding sources<sup>11</sup> and found that aggregated nutrition expenditures funded by the government and development partners in the health sector amounted to RWF 7 billion in FY2014/15. However, these studies did not track nutrition spending in non-health sectors, leading to an underestimation of total nutrition spending. Some studies on donor nutrition spending in Rwanda have used the OECD’s Development Assistance Committee data, which use broad categories such as “basic nutrition” and do not disaggregate by interventions. A recent health budget brief by UNICEF<sup>12</sup> identified government allocations to four nutrition-specific budget lines (see

<sup>8</sup> Ministry of Health: Rwanda Health Resource Tracking Output Report. Expenditure FY2014/15.

<sup>9</sup> Ministry of Health: Fourth Health Sector Strategic Plan July 2018-June 2024. Republic of Rwanda

<sup>10</sup> Ministry of Health: Rwanda Health Resource Tracking Output Report. Expenditure FY2014/15.

<sup>11</sup> Mukabutera (2017).

Table 2) and noted a substantial budget increase for these four lines from RWF 4 billion in fiscal year 2014/15 to RWF 26.3 billion in fiscal year 2018/19. However, detailed expenditure data across sectors are needed in order to fully monitor all expenditures on nutrition interventions.

**TABLE 2: NUTRITION-SPECIFIC BUDGET LINES**

Ministry / Agency	Budget line for nutrition
Ministry of Agriculture	Nutrition-sensitive agriculture and resilience mechanisms
Ministry of Local Government and LODA	Nutrition support services (milk for malnourished children)
Ministry of Health	Nutrition
Ministry of Gender and Family Promotion and the NECDP	Nutrition and hygiene

Notes: LODA = Local Administrative Development Agency. NECDP = National Early Childhood Coordination Program

**Using a common methodology will facilitate more reliable country comparisons on nutrition spending.**

International studies estimating comparative nutrition expenditures have been constrained by a lack of data, differences in the classification of nutrition-sensitive and nutrition-specific activities, and the lack of a common methodology. The classification of nutrition-related activities differed depending on whether the analyses used an international framework, national policies, or an algorithmic questionnaire. For example, in Bhutan the categorization between nutrition-specific and nutrition-sensitive activities differed from the global literature as it followed the recommendations of Bhutan's National Nutrition Task Force. The studies also varied in terms of how they applied weights, ranging from consultation-based categorization in Tanzania, to a reliance on secondary data sources in Pakistan, to choosing not to weigh any interventions in Bhutan. The Scaling Up Nutrition (SUN) movement, a global donor network aimed at ending malnutrition, summarized all methodologies for estimating public financing for nutrition across countries in 2016. It found that the sum of all nutrition-sensitive budget lines represented an average of about 1.7 percent of general government expenditures across 24 countries and an average of US\$4.4 per capita. However, large variations existed between countries, ranging from 0.01 percent to over 7 percent of the government budget spent on nutrition-related activities, and per capita allocations ranging from US\$0.1 to US\$57.0 per capita. These variations may reflect significant policy differences between countries, weighting methodologies, or different nutritional burdens.<sup>13</sup>

**This is the first comprehensive analysis of nutrition expenditures in Rwanda.** Using expenditure information from the government and development partners, the study identifies and categorizes nutrition-specific and -sensitive interventions and then analyzes actual expenditures over three fiscal years. A survey was used to collect data on off-budget nutrition expenditure by development partners. The aim of the study is to contribute to the development of a nutrition expenditure methodology, to inform the optimal allocation of resources, to estimate the resources needed to scale up high-impact interventions to achieve strategic targets, and to assess the nutrition responsiveness of Rwanda's public financial management system.

<sup>12</sup> UNICEF (2018).

<sup>13</sup> Greener et al (2016).

## 2. Methodology and Data

This section describes the methods and data sources used to categorize interventions relevant to nutrition outcomes and conduct the analysis.

### 2.1 How Did Others Measure Nutrition Expenditures?

**There is no common methodology for assessing nutrition expenditures.** Governments need information on nutrition expenditures in order to set targets for financing high-impact interventions, but have no reliable way to know what is already being spent. As a result, analysts have used different approaches (Box 1).

**The Systems of Health Accounts (SHA) methodology provides an internationally standardized framework for the systematic measurement of expenditures related to health care.** Governments use the SHA to monitor their health expenditures and to compare their results over time and against those of other countries. Nutrition is not systematically tracked in the SHA, except for specific cases such as vitamin and nutritional supplements, and it does not identify any nutrition investments outside the health sector. Following a request from West African countries at a nutrition focal point meeting of the Economic Community of West African States (ECOWAS) in 2010, the WHO Intercountry Support Office for West Africa in Ouagadougou piloted the use of National Health Accounts for tracking expenditures on nutrition in Burkina Faso. However, this method also only monitors nutrition expenditures in the health sector.

**Economic analysis has mainly been limited to estimations of the relative cost-effectiveness of interventions.** Cost-effectiveness studies generally use randomized trials to test the effectiveness of interventions in different contexts. For example, a systematic review of 19 studies in OECD countries found that oral nutritional supplements are a cost-effective way to reduce hospital costs.

**The Lives Saved Tool (LiST), a methodology developed by the Johns Hopkins Bloomberg School of Public Health, has been used to estimate the resources needed to scale up nutrition-specific interventions to achieve targets.** Using an Excel-based costing exercise, LiST has estimated that scaling up effective nutrition interventions to 90 percent coverage would lead to a 40 percent decline of stunted children in low- and middle-income countries by 2025. The resources needed to meet the global stunting target in 37 high-burden countries was estimated to be US\$49.5 billion over 10 years, including US\$44.2 billion for direct service delivery and US\$5.3 billion for monitoring and evaluation and policy development. This means that current global financing for nutrition would have to increase three-fold annually to achieve the 2025 stunting target for children under the age of 5.

**The Optima Nutrition mathematical model developed by a network of international academic institutions is another tool that has been used to inform the efficient allocation of limited resources for nutrition to achieve national nutrition goals.** The Optima Nutrition model contains: (i) a core epidemiological model that relates the effectiveness of interventions to epidemiological outcomes; (ii) cost functions that relate coverage and expenditure on interventions to intervention outcomes; (iii) an objective function defined by national strategic targets and

<sup>14</sup> Greener et al (2016).

<sup>15</sup> OECD et al (2017).

<sup>16</sup> Lie et al (2011).

<sup>17</sup> Elia et al. (2016).

<sup>18</sup> Shekar, et al (2017).

constraints defined by logistic, ethical, political, and financial considerations; and (iv) a formal mathematical optimization algorithm around other components to estimate the most efficient allocation of resources. Optima Nutrition reproduces the impact model of LiST to estimate allocative efficiency. In Bangladesh, the Optima Nutrition model identified the optimal mix of interventions to maximize the number of children that survive and are not stunted by shifting budget allocations to infant and youth child feeding (IYCF) for children aged between 6 and 23 months old (69 percent) and vitamin A supplementation (31 percent). Optima Nutrition has been used to project allocations based on different budget scenarios. In Bangladesh, the model recommended that, if additional resources became available, the provision of complementary foods should be integrated into the package of interventions once the marginal cost of IYCF became too high.

**The Scaling Up Nutrition (SUN) movement proposes a three-step approach to analyze nutrition-related allocations.** The SUN approach includes identification, categorization, and weighting based on key budget line items in the national nutrition plan. The nutrition expenditure analysis in Pakistan used search terms following an extensive review of the national nutrition policy and the provinces' strategic plans, then further expanded after a review of the budget data of the federal and Sindh governments. The resulting key search terms were applied on the budget's "Cost Centers" and "Project Description" fields to identify potentially relevant nutrition budget lines. In Bhutan, nutrition-related strategies and action plans were reviewed to identify relevant ministries and their respective departments that financed nutrition-related activities. Then all line item budgets at the activity and sub-activity level were reviewed for each ministry. In Ethiopia, nutrition expenditure tracking was aligned with Ethiopia's sixth Health Accounts exercise. It used a revised SHA survey tool to collect data from all government entities who participated in the National Nutrition Program 2016-2020 and had nutrition programs at the time when the data were collected.

**The SUN method categorizes budget items as either "nutrition-specific" or "nutrition-sensitive investments."** It defines nutrition-specific as a budget line item for a nutrition department, program, or intervention, whereas nutrition-sensitive covers programs that addresses underlying causes of malnutrition. However, these classifications can vary across countries and in the existing global literature (see Box 1). Within Ethiopia, nutrition-sensitive activities had to meet three criteria: (i) an intention to achieve nutrition results and measure them for women, adolescent girls, or children; (ii) a nutrition objective or indicator; and (iii) a likelihood of contributing to the achievement of the activity's explicit nutrition-sensitive outcomes. In Bhutan, nutrition-specific and nutrition-sensitive are aligned with the categories set by Bhutan's National Nutrition Task Force (NNTF), which is comprised of focal points from relevant ministries and development partners. In the international literature, interventions such as school feeding and ECD are considered to be nutrition-sensitive, but in Bhutan, these are considered to be nutrition-specific. Similarly, malaria, HIV/AIDs and tuberculosis, mental health, women's empowerment, and gender equality are considered nutrition-specific in the global definition, but not to Bhutan's NNTF. In Pakistan, the *2013 Lancet Framework for Actions to Achieve Optimum Fetal and Child Nutrition and Development* was used to differentiate between nutrition-sensitive and nutrition-specific interventions.

**The SUN methodology proposes weighting nutrition-sensitive interventions for the proportion that can be attributed to nutrition, but in practice every country uses a different method for assigning weights.** Bhutan did not use weighting due to the difficulty in assigning such weights, but weighting was used in Pakistan, Ethiopia, and Tanzania, to avoid overestimating the extent of nutrition funding across sectors. In Pakistan, budget lines were weighed based on a detailed review of each program budget line item to establish what proportion was attributable to nutrition. In Tanzania, weights were established based on extensive consultations and interviews with key

<sup>19</sup> Pearson et al (2018).

<sup>20</sup> Fracassi et al (2017).

<sup>21</sup> Black et al (2013).

stakeholders as well as policy documents.<sup>22</sup> In Ethiopia, a hybrid approach was used where particular components were approximated based on consultations with program managers if the financial records did not provide sufficient data.<sup>23</sup> All of these weights were applied inconsistently across countries, resulting in different comparative results (Box 1).

### BOX 1: HOW DID OTHER COUNTRIES MEASURE NUTRITION EXPENDITURES

**Pakistan:** Pakistan's Nutrition Expenditure Review used the SUN framework to identify and code government spending on nutrition at the country level drawing on expenditure data from the country's financial management information system. First, it identified the relevant programs and budget lines using an indicative list of search terms compiled from a comprehensive review of the Federal Budget and Sindh Government Budget for four fiscal years. Second, budget lines were categorized as nutrition-specific or nutrition-sensitive based on the *2013 Lancet Framework for Actions to Achieve Optimum Fetal and Child Nutrition and Development*. Finally, a dual weightage system (25% or 100%) was used to apportion relevance to nutrition. This was considered necessary as budget line items were often insufficiently granular to distill nutrition relevant content. Off budget expenditures on nutrition were estimated by reaching out directly to the most prominent donor and philanthropic organizations.

**Tanzania:** Interviews were conducted with local governments and relevant ministries and agencies both on the mainland and in Zanzibar to understand the nutrition planning and budgeting processes. Government spending data was drawn from the central and local government financial management information system. Off budget donor spending was obtained through surveys. A list of key terms was created to determine the relevance of budget lines to nutrition guided by the Tanzania National Multisectoral Nutrition Action Plan. For budget lines relevant to nutrition but application beyond nutrition, a weighting system was applied. Attribution was given between 10 and 100 percent, based on information available, interviews or policy documents.

**Indonesia:** As part of the government's National Program to Accelerate Stunting Reduction, a public expenditure review was conducted to analyze the level, composition, and effectiveness of public spending on stunting interventions. Budget and expenditure data were drawn from the financial management information systems across relevant ministries. The coding of expenditure data was done manually based on guidelines issued jointly by the Ministry of Finance and the Ministry of Planning. As expenditure data was only provided at the "Output" level it was often not possible to disaggregate individual interventions. Therefore, a weighting approach was taken to avoid overestimating actual spending.

**Ethiopia:** In Ethiopia, the nutrition expenditure review was conducted to collect on-budget and off-budget expenditure data related to the National Nutrition Program (NN-II) 2016-2020. A list of nutrition stakeholders was compiled, including donor institutions, non-governmental implementing agencies, and government ministries that invest in nutrition-related activities across sectors. In line with the sixth Health Accounts (HA VI) exercise that employed the SHA 2011 framework, an Excel-based survey was used to collect additional information from these stakeholders. Seven of the 13 NN-II government agencies provided data, which was classified as nutrition-sensitive or nutrition-specific based on the SUN methodology. For nutrition-sensitive programs, financial records and/ or consultations with the program managers were used to quantify the extent of nutrition-related activities within each program.

**Bhutan:** In Bhutan, nutrition-related strategies and action plans were reviewed to identify ministries and departments with nutrition activities. Nutrition-specific and sensitive interventions were classified based on definitions set out by the Nutrition Task Force and on based on the feedback of government and development partner stakeholders. Nutrition spending was not weighed.

Sources: Pakistan: Oxford Policy Management (2019). Tanzania: Oxford Management (2018). Indonesia: The World Bank (Forthcoming). Ethiopia: Federal Democratic Republic of Ethiopia and Results for Development (2018). Bhutan: The World Bank (2019).

<sup>22</sup> Oxford Policy Management Limited (2018).

<sup>23</sup> Federal Democratic Republic of Ethiopia (2017).

## 2.2 Data Sources

For the purpose of this nutrition expenditures analysis for Rwanda, four main data sources were used: (i) policy documents; (ii) government expenditure data; (iii) off-budget aid data from development partners; and (iv) published macro-fiscal data.

*Nutrition-relevant policy documents* were identified and reviewed, and *government expenditure data* for all sectors related to nutrition were made available by the Ministry of Finance and Economic Planning (MinEcoFin) and extracted from the FMIS for fiscal years 2015/16, 2016/17, and 2017/18. Given the intersectoral nature of nutrition interventions, expenditures were captured for all relevant government ministries and agencies.<sup>24</sup> The variables extracted from the MinEcoFin's FMIS included government vote, program, sub-program, output, activity, revised budget<sup>25</sup>, and actual expenditure. For the three fiscal years, 11,487 entries (or activities) were identified. Only actual expenditure figures as retrieved from the MinEcoFin FMIS were used for the analysis.

*Off-budget funding data* was collected by submitting a data request to all 23 development partners working on the nutrition agenda in Rwanda.<sup>26</sup> Finally, *global macro-fiscal data* were sourced from MinEcoFin, the IMF World Economic Outlook, and World Bank's World Development Indicators.

## 2.3 Methods

**A comprehensive set of nutrition-relevant terms was identified to search the more than 11,000 government expenditure lines for nutrition-relevant expenditures.** These search terms were identified from a review of Rwanda's nutrition policy documents (including the Draft National Nutrition Policy 2019, the National ECD Strategic Plan 2018-2024, and the ECD Single Plan of Action 2018-2019), a review of the expenditure data, and the general nutrition literature. The team discussed the search terms (Box 2) with nutrition experts in Rwanda. The list of key terms was kept deliberately broad in order to minimize exclusion errors.

### BOX 2: KEY SEARCH TERMS USED TO IDENTIFY NUTRITION-RELATED ACTIVITIES

"1000"; "Acute malnutrition", "Anemia", "Balanced energy", "Behavior change", "Behavior change communication", "Biofortification", "Biofortified", "Breastfeeding", "Calcium", "Cash transfer", "Child feeding", "Chronic malnutrition", "Clean water", "Complementary feeding", "Complementary foods", "Deworming", "Eclampsia", "Folic acid", "Folate", "Food intake", "Food security", "Fortification", "FBF", "Fortified blended food", "Growth monitoring", "Growth promotion", "Handwashing", "Home production", "Hygiene", "IYCF", "Infant and young child feeding", "Iodine", "Iron", "Kitchen garden", "Latrine", "Lipid-based nutrition supplements", "Livelihood support", "LNS", "Magnesium", "Magnesium Sulphate", "Malaria", "MIYCN", "Maternal, infant, and young child nutrition", "Micronutrient powder", "Micronutrients", "Moderate acute malnutrition", "Nutrition", "Nutrition commodities", "RUTF", "RUSF", "F100", "F75", "Nutritious foods", "Obesity", "Ongera", "ORS", "Oral rehydration salts", "Oral rehydration solutions", "overweight", "Pre-eclampsia", "Protein", "Sanitation", "School feeding", "School nutrition", "Severe acute malnutrition", "Small animals", "Small livestock", "Girinka program", "One cup of milk", "Stunting", "Supplementary foods", "Supplementary nutritious foods", "Supplementation", "Supplements", "Therapeutic feeding", "Therapeutic foods", "WASH", "Wasting", "Zinc"

<sup>24</sup> Including the Ministry of Health (MOH), the Ministry of Agriculture and the Rwanda Agriculture Board (MINAGRI), the Ministry of Education (MINEDUC), the Ministry of Infrastructure (MININFRA), the Ministry of Disaster Management and Refugee Affairs (MIDI-MAR), the Ministry of Local Government and the Local Administrative Entities Development Agency (MINALOC), the National Early Childhood Development Program (NECDP), and the Ministry of Gender and Family Promotion (MIGEPROF).

<sup>25</sup> Original budget data were not shared with the team, making it not possible to assess the credibility of the budget.

<sup>26</sup> ADRA; AEE; Caritas; Catholic Relief Services; Clinton Health Access Initiative; DfID; FAO; Gardens for Health International; Global Communities Rwanda; IFAD; JICA; JPHIEGO; Partners in Health; SNV Netherlands Development Organization; Society for Family Health; SUN Civil Society Alliance; UNICEF; USAID; WFP; WHO; World Relief Rwanda; World Vision International; and FXB.

### Identifying and Coding Nutrition Activities in Government Expenditures

Once approved, the set of search terms were applied to the “Program,” “Sub-program,” “Output,” and “Activity Description” fields in the government expenditure database to identify nutrition-related activities and expenditures. This yielded 2,231 potentially relevant nutrition activities across all sectors, which were retained for further manual review to confirm relevance. The manual review process eliminated about half (1,116), leaving a final of 1,115 nutrition-related activities across all sectors.

**A team of four health, nutrition and finance experts coded the government’s nutrition expenditures based on the nature of each activity.** Reviewers had to group activities into broader categories. For example, all behavior change communication activities (such as 1,000-day campaigns and TV/ radio advertising) were grouped together under a “behavior change” code, while all activities related to micronutrient supplementation (such as the procurement of nutrition commodities and their distribution to children or to pregnant women) were grouped under a “nutrition supplementation” code. For the coding of nutrition-sensitive and enabling environment expenditures, the team used the “one step removed” principle as was also done in the Tanzania and Zanzibar Nutrition Public Expenditure Reviews.<sup>27</sup> This meant that budget lines that included direct nutrition-related activities were accounted for (such as the procurement and distribution of vaccines), but activities that were peripheral to nutrition-related activities were not (such as the construction or renovation of health facilities). As such this may be an underestimation of government contributions. A detailed summary of the coded interventions is provided in Annex 1.

### Grouping Coded Activities into Three Categories

**Nutrition-related interventions were coded into three categories.** The 1,115 nutrition-related activities in the government expenditure database were classified as nutrition-specific, nutrition-sensitive, or enabling environment investments (Box 3). This classification follows the Lancet framework outlined in Black et al (2013) (Figure 1).<sup>28</sup>

#### BOX 3: DEFINITIONS USED TO CLASSIFY NUTRITION-RELATED INTERVENTIONS

- **Nutrition-specific** is defined as: “*Nutrition-specific interventions and programs address the immediate determinants of fetal and child nutrition and development – adequate food and nutrient intake, feeding, caregiving and parenting practices, and low burden of infectious diseases.*”
- **Nutrition-sensitive** is defined as: “*Nutrition-sensitive interventions and programs address the underlying determinants of fetal and child nutrition and development – food security; adequate caregiving resources at the maternal, household, and community levels; and access to health services and a safe and hygienic environment – and incorporate specific nutrition goals and actions. Nutrition-sensitive programs can serve as delivery platforms for nutrition-specific interventions, potentially increasing their scale, coverage, and effectiveness.*”
- **Enabling environment** is defined as: “*interventions and programs that can be built to enhance growth and development of health consequences.*” This can include evaluations, coordination, policy, and investment in building capacity.

<sup>27</sup> Oxford Policy Management (2018).

<sup>28</sup> Black et al (2013).

**FIGURE 1: LANCET FRAMEWORK FOR ACTIONS TO ACHIEVE OPTIMUM FETAL AND CHILD NUTRITION AND DEVELOPMENT**

Nutrition-Specific Interventions	Nutrition-Sensitive Interventions	Building an Enabling Environment
<ul style="list-style-type: none"> <li>• Adolescent health and preconception nutrition</li> <li>• Maternal dietary supplementation or fortification</li> <li>• Breastfeeding and complementary feeding</li> <li>• Dietary supplementation</li> <li>• Dietary diversification</li> <li>• Feeding behaviors and stimulation</li> <li>• Treatment of severe acute malnutrition</li> <li>• Disease prevention and management</li> <li>• Nutrition interventions in emergencies</li> </ul>	<ul style="list-style-type: none"> <li>• Agriculture and food security</li> <li>• Social safety nets</li> <li>• Early child development</li> <li>• Maternal mental health</li> <li>• Women’s empowerment</li> <li>• Child protection</li> <li>• Class education</li> <li>• Water and sanitation</li> <li>• Health and family planning services</li> </ul>	<ul style="list-style-type: none"> <li>• Rigorous evaluations</li> <li>• Advocacy strategies</li> <li>• Horizontal and vertical coordination</li> <li>• Accountability incentives, regulation, and legislation</li> <li>• Leadership programs</li> <li>• Capacity investments</li> <li>• Domestic resource mobilizations</li> </ul>

Source: Adapted from Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., et al (2013). Maternal and Child Under-nutrition and Overweight in Low-income and Middle-income Countries. *The Lancet*, 382 (9890).

**Rwanda nutrition spending data was categorized following the Lancet framework.** Expenditure information and program, output, or activity description in the Rwanda budget does not perfectly match the intervention description as per the Lancet framework (Figure 1). Some activities, such as the Girinka heifer program, are highly context specific. The team used a grounded theory approach<sup>29</sup> to classify the 1,115 nutrition activities into the three broad categories from the framework. It was not always possible to perfectly align the Rwanda context (activity descriptions) with the Lancet framework. For example, in the **“nutrition-specific” sub-categories** the current coding combines spending on management of acute malnutrition with prevention and management of micronutrient deficiencies (micronutrient powders, Vit A, iron/folic acid in pregnancies).

How activities from the Rwanda spending data were mapped to the Lancet framework is outlined in Figure 2. All high-impact nutrition activities listed as “nutrition-specific” under the Lancet Framework were also considered as “nutrition-specific” in this analysis (Figure 2). These included nutrition-specific behavior-change activities, deworming, the creation and distribution of fortified food, nutrition supplementation, and nutrition assessments aimed at preventing malnutrition (such as measuring upper arm circumference in children under 5 years of age).

<sup>29</sup> Yin (2015)

**FIGURE 2: RWANDA NUTRITION INTERVENTIONS MAPPED AGAINST THE LANCET NUTRITION FRAMEWORK FOR ACTION**

Nutrition-Specific Interventions	Nutrition-Sensitive Interventions	Building an Enabling Environment
<ul style="list-style-type: none"> <li>• behavior change (specific); deworming; fortified based food; nutrition supplement; and nutritional assessment</li> </ul>	<ul style="list-style-type: none"> <li>• behavior change (sensitive); chw incentives (sensitive); drinking water; ecd; family planning; food security; girinka; girl’s education; immunization services; kitchen gardens; malaria interventions; milk; reproductive health; sanitation; school feeding; supplementary feeding for hiv; vup; and women empowerment.</li> </ul>	<ul style="list-style-type: none"> <li>• chw incentives; ciff; coordination; food security (research); girinka (policy); immunization support; m&amp;e; malaria intervention; support services; operational expenditures; sanitation (studies); supervision; training; wash (secondary school); and women empowerment (strategy &amp; advocacy)</li> </ul>

The following criteria were applied for including or excluding activities in the nutrition sensitive category:

- The Lancet Framework considers maternal mental health as “nutrition-sensitive.” However, the Rwanda budget is insufficiently disaggregated to differentiate maternal mental health from general mental health, which was considered to be too broad a category to be included.
- Expenditures on community health workers (CHWs) such as incentive payments were included when nutrition activities were explicitly stated in the budget description. CHW expenditures were classified as enabling environment investments when nutrition was not specified in the activity.
- Agriculture livestock activities were included if related to a specific nutrition program. For example, the insemination of cows was excluded, unless it was specifically for the Girinka heifer program.<sup>30</sup>
- Social protection programs were coded as VUP (short for “Vision 2020 Umurenge Program”). VUP activities were put in this category if they included budget lines relating to the provision of a minimal package of services to vulnerable populations.
- VUP activities pertaining to all other forms of income support, public work programs, and activities that support income-generating activities were excluded because they target all individuals belonging to category 1 of the Ubudehe system, and not just families with younger children. Any VUP activities that targeted households with younger children would have been included as nutrition-sensitive direct support, but these activities have not yet started.
- All activities that include providing clean water to the general population and to refugees were included (such as infrastructure for and construction or extension of water supply systems or treatment plants and the rehabilitation of boreholes).

<sup>30</sup> The Girinka Program, managed by the Ministry of Agriculture, aims to reduce child malnutrition and increase the household income of poor farmers by providing them with a heifer. The program seeks to increase milk consumption, agricultural productivity (by encouraging the use of manure as fertilizer), and income generation.

- With the exception of providing clean drinking water infrastructure to households, budget lines relating to infrastructure development (such as irrigation and agriculture production or the construction of health facilities) were excluded as their relevance to nutrition outcomes was not sufficiently direct.
- Activities related to coordination, training, research/knowledge management, advocacy, policy development, capacity building, and overhead support were categorized under the “enabling environment” umbrella.
- All monitoring and evaluation activities were generally coded as M&E, unless they referred to a nutrition-related program (such as Girinka) in which case they were included to capture the full costs of the program.

### *Wages and Salaries*

Wages and salaries are already paid by the health system overall and are captured in the SHA.<sup>31</sup> Payments for staff were only included in this assessment if the relation to nutrition was explicit in the budget. As it was not possible to identify how many staff work on nutrition-related activities, attributing the entire wage bill to nutrition would have grossly overestimated total government nutrition expenditures. This is a major difference to the Optima model, which includes the cost of wages.

### *Validation of Categorized Activities*

**The categorization of coded activities went through two rounds of validation.** Validation included one internal with the World Bank technical lead on nutrition, and another external validation with the NECDP’s management. Both provided comments on the basis of which the coding of activities was revised, and this final dataset was used for the analysis.

### *Off-budget Nutrition Expenditures by Development Partners*

**When replying to the questionnaire provided to them for this analysis, development partners self-categorized their nutrition-related spending into the same three categories.** Responses were validated for consistency and accuracy. The team cross-checked the categorizations (nutrition-specific, nutrition-sensitive, and enabling environment) against the provided budget line description, and re-classified activities if necessary.

**The survey did not collect information on salaries of development partners and implementing partners.** The reasons behind this included the challenge of apportioning the time that staff spent on nutrition, the lack of sufficient information on personnel workload and on what time recording systems were used, variability between the use of local versus international pay grades within and across organizations, the difficulty of ensuring consistency in the reporting of data across many organizations, and the limited comparability of these salaries with government salaries.

### *Weighting Expenditures*

**Some studies assign weights to nutrition-sensitive activities and enabling environment expenditures** to estimate the proportion that directly impact nutrition outcomes. To examine the effect of weighting on Rwanda’s nutrition expenditures, the team conducted a sensitivity analysis. All nutrition-specific interventions, by default, received a full 100 percent weight. Different weights were assigned to nutrition-sensitive and enabling environment

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<sup>31</sup> World Health Organization (2011).

activities, following a variant of the methodology recommended by the Scaling Up Nutrition (SUN) initiative. Details on sensitivity analysis results and methods are presented in Annex 4 and 5 respectively. The sensitivity analysis (Annex 4) shows that weights reduce the total amount of nutrition-sensitive and enabling environment spending considerably.

**However, as there is no theory or agreed methodology to support the purpose and value of assigning weighting to nutrition-sensitive interventions, the main analysis presents unweighted expenditures.** Weights used in other studies (Box 1) varied highly by operational context and program design, and the value of the weights differed depending on who was consulted, which means that they are not comparable. Furthermore, for pragmatic reasons, the full cost of a nutrition-sensitive program would need to be implemented to register nutrition-related outcomes. Therefore, this study takes an accounting perspective and assigns a full weight to all nutrition related activities, regardless of relevance or category. This may mean that expenditure items attributed to nutrition also serve other purposes (such as the provision of infrastructure for clean water to households) and thus may be an overestimate, but full attribution is less problematic for the assessment of trends over time. It also ensures consistency as weighting can be subject to interpretation.

**The analysis aims to produce basic comparable indicators.** The proposed indicators include total nutrition spending as a percentage of general government spending, nutrition-specific spending as a percentage of general government spending and as a percentage of government health spending, and nutrition-specific spending per child under the age of 5. Indicators can be compared over time and across studies that use the same methodology.

### *Identifying Combinations of High Impact Interventions Through Optima Modelling*

**The assessment provides various spending scenarios and how these would affect nutrition outcomes.** This was done using the Optima module for nutrition. For this modeling, key inputs include data on health and demographic indicators, coverage and marginal unit cost of key nutrition interventions (Table 3). The health and demographic indicators included utilization of health services, fertility, mortality, causes of death, morbidity incidence, demographic projections of key populations, and the age distribution of nutritional status indicators. The latter data were obtained from the 2014-15 Rwanda Demographic and Health Survey<sup>32</sup> (weight-for-height, height-for-age, breastfeeding, and birth spacing distribution, diarrhea incidence, child mortality rates, women's health facility attendance, and use of family planning), the UN's World Population Prospects<sup>33</sup> (baseline population and population projections), UNESCO<sup>34</sup> (female secondary school enrollment), and the Rwanda Malaria Indicator Survey<sup>35</sup> (health facility attendance for children). Data on the coverage of interventions were obtained from program data when available or from population surveys.

**Unit costs for some interventions were estimated for the Optima model.** Costs were roughly estimated through consultation with staff from the Rwanda Biomedical Center (RBC)<sup>36</sup> using an ingredients-based approach and through a review of program budget documents from development partners to take into account the commodity costs, provider time, training, transport, and logistics required to deliver each intervention. Where possible, these commodity costs were compared with the essential medicines list provided by the RBC as well as with UNICEF's

<sup>32</sup> National Institute of Statistics of Rwanda (NISR), Ministry of Health (MOH) [Rwanda], and ICF International. 2015. Rwanda Demographic and Health Survey 2014-15. Rockville, Maryland, USA: NISR, MOH, and ICF International.

<sup>33</sup> United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, Online Edition.

<sup>34</sup> UNESCO Institute for Statistics (<http://uis.unesco.org/>)

<sup>35</sup> MOPDD and ICF (2017). .

<sup>36</sup> We met with several RBC staff during a staff retreat in Huye on August 22, 2019 including the Maternal Health Senior Officer, the Acting Community Health Unit Director, the MCH Senior Technical Assistant, and a supply chain specialist.

annual procurement plan for essential commodities, including the cost of transportation. In contrast to the government expenditure analysis, the Optima unit cost model includes estimates for staff wages. These data were obtained from the government's salary scale for facility staff. Where Rwanda-specific costs were not available, global cost estimates were used.

**Several caveats apply to the Optima analysis.** Optima requires an estimation of the unit cost of high-impact interventions, which is then multiplied by their coverage to estimate total spending on the 14 high-impact interventions. However, this hypothetical baseline estimate exceeded the total nutrition-specific expenditures as reported by the government and donors by a factor of two. This difference can partially be explained by the wage costs, which are factored into the Optima unit cost model but could not be apportioned from the government or donor expenditure data. Furthermore, government and donor spending data are classified differently from the Optima interventions. Therefore, any conclusions on spending adjustments from Optima need to be validated as they are not based on government and donors' actual expenditures. For an analysis which can actually inform reallocation of existing resources, intervention costs have to be estimated from actual government and development partner expenditure data. Furthermore, this expenditure data will need to be disaggregated to the individual intervention level. Despite these shortcomings, establishing a baseline and an optimized spending scenario is still useful in providing general guidance on how to achieve greater value for money from nutrition investments.

**TABLE 3: DATA SOURCES USED FOR OPTIMA**

Data	Source
Health and demographic	2014/15 Rwanda Demographic and Health Survey World Population Prospects UNESCO Institute for Statistics Rwanda Malaria Indicator Survey
Intervention coverage	2014/15 Rwanda Demographic and Health Survey Rwanda Stunting Prevention and Reduction Project Data Fortified Blended Foods Program Data
Unit costs	Consultation with the RBC
Commodity cost	RBC Price Sheet for Stunting Prevention and Reduction Project Community-Based Tools RBC Price Sheet for Essential Medicines UNICEF Annual Procurement Plan for Essential Commodities
Staff salary	Salary amount for HRH Staff in Global Fund Project used as proxy



## 3. Results

### 3.1 Government Nutrition Spending

**Government spending on nutrition is growing but remains at a low level.** This analysis included 100 percent of expenditures for nutrition-sensitive and enabling activities as well as for nutrition-specific activities.<sup>37</sup> Total government spending on nutrition-specific, nutrition-sensitive, and enabling environment interventions is low but increasing (Table 4). It doubled in nominal terms between 2016 and 2018 to about RWF 54 billion (weighted RWF 22 billion), which amounts to US\$36 (weighed US\$15) per child under the age of 5. Government spending on nutrition-specific interventions amounts to less than US\$6 per child under the age of 5. This is US\$4 below the recommended US\$10 per child<sup>38</sup> that is necessary to scale up an effective package of nutrition interventions to reach the 2025 global nutrition targets for stunting, anemia and severe wasting.

**Total government nutrition spending in Rwanda is driven mainly by nutrition-sensitive spending.** Nutrition-sensitive spending makes up most of the government's nutrition spending and has increased at a steady pace. In 2018, spending on nutrition-specific interventions decreased in absolute and relative terms. Investments in enabling environment is small and has also decreased since fiscal 2016/17 (Figure 3).

**TABLE 4: GOVERNMENT EXPENDITURES ON NUTRITION, 2015-2018**

Government Expenditures	2015/16	2016/17	2017/18
Total government spending (RWF)	1,720,530M	1,930,570M	2,188,900M
Health* related spending (RWF)	86,866M	168,985M	183,339M
Total nutrition spending (RWF)	18,173M	40,584M	56,491M
Nutrition-specific spending (RWF)	1,791M	10,058M	8,670M
Nutrition-sensitive spending (RWF)	13,813M	27,387M	45,200M
Nutrition enabling environment spending (RWF)	2,570M	3,139M	2,621M
Total nutrition as % of general govt expenditures	1.1%	2.1%	2.5%
Nutrition-specific as % of general govt expenditures	0.1%	0.5%	0.4%
Nutrition-specific as % of govt health expenditures	2.1%	6.0%	4.7%
p/c total nutrition spending (USD)	2.12	4.12	5.25
p/U5 total nutrition spending (USD)	14.5	28.2	36.0
p/c nutrition-specific spending (USD)	0.2	1.0	0.8
p/U5 nutrition-specific spending (USD)	1.4	7.0	5.8

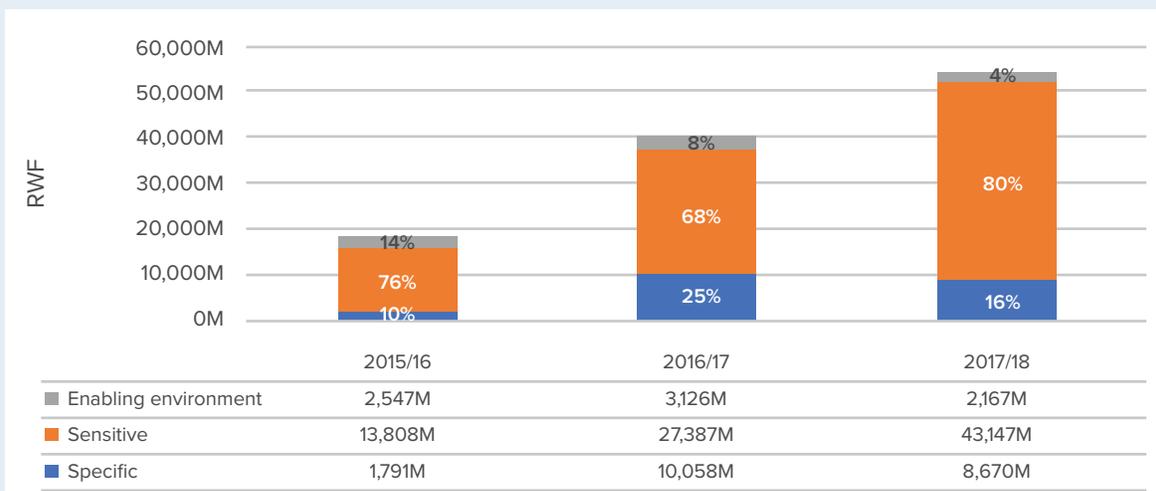
Source: Authors, based on MINECOFIN (2019)

Notes: p/c = per capita; p/U5 = per child under 5. All amounts in nominal terms, and unweighted.

\*Health-related spending includes all relevant activities from MINISANTE, the RBMC, all districts, MINALOC, and MinEduc. Not included are direct transfers from MinEcoFin to statutory funds or extra-budgetary hospitals.

<sup>37</sup> Annex 4 presents weighted results from the sensitivity analysis.

<sup>38</sup> Shekar (2017).

**FIGURE 3: TOTAL GOVERNMENT NUTRITION EXPENDITURES, 2015-2018**

Source: Authors, based on IFMIS data from MINECOFIN (2019)

**The Rwandan government allocates less to nutrition than governments in comparator countries.** Limited information is available on nutrition expenditures by comparator countries. Furthermore, methodological differences complicate comparability, and care needs to be taken with reaching firm conclusions. Given available data, the following picture emerges: At Rwanda's level of GDP and relatively high stunting rate, the government is spending a small share of the budget on nutrition-related activities and less than peer countries such as Tanzania, Indonesia, and Bhutan in absolute terms. Nutrition specific spending per child in Rwanda is higher than in Tanzania or Ethiopia (Table 5). If weighted amounts are considered, the government's estimated allocation to nutrition would be even lower (about half).

**TABLE 5: COMPARING RWANDA'S NUTRITION EXPENDITURES WITH PEER COUNTRIES, LATEST YEAR AVAILABLE**

Category	Rwanda	Tanzania	Ethiopia	Indonesia	Bhutan
GDP p/c (US\$)	773	1,050	772	3,894	3,360
Stunting rate (%)	37.9	34.4	38.4	36.4	33.6
Total nutrition as % of GGE	2.5	3.8	NA	2.6	3.0
Nutrition-specific as % of GGE	0.4	NA	NA	NA	NA
Nutrition-specific as % of GHE	4.7	NA	NA	5.3	13.0
p/c nutrition-specific spending (US\$)	0.8	NA	NA	5.8	8.5
p/U5 nutrition-specific spending (US\$)	5.8	0.5	4.8	NA	NA

Source: Authors, based on a review of World Bank reports

Note: All in nominal terms and not weighed. Weighed estimates are provided in Annex 3.

**Many different agencies implement the government’s nutrition-related interventions.** The RBC is the main implementing agency in health and, as such, the main implementing body for nutrition-specific interventions. Nutrition-sensitive interventions are implemented primarily by districts administrations, LODA, and WASAC. While many more agencies are involved in nutrition-sensitive interventions, over 95 percent of these are administered by the district administrations, LODA, the Water and Sanitation Corporation (WASAC), the RBC, and the Rwanda Agricultural Board (RAB) (Table 6). These include activities such as monitoring milk distribution, the construction of relevant water supply systems, and the Girinka heifer program.

**TABLE 6: NUTRITION SPENDING BY GOVERNMENT MINISTRIES AND AGENCIES, 2015-2018**

Ministry/ Agency		2015/ 16	2016/ 17	2017/ 18
SPECIFIC	RBC	99.9%	98.6%	99.6%
	RAB	0.1%	0.0%	0.1%
	MinAgri	0.0%	0.0%	0.0%
	NECDP	0.0%	0.0%	0.3%
	Districts	0.0%	0.1%	0.0%
	MINALOC	0.0%	0.1%	0.0%
	MiniSante	0.0%	1.3%	0.0%
	<b>Subtotal</b>	<b>9.9%</b>	<b>24.8%</b>	<b>16.1%</b>
SENSITIVE	Districts	41.2%	43.3%	42.5%
	RAB	21.4%	1.4%	4.0%
	LODA	18.3%	7.7%	6.1%
	MinAgri	9.7%	0.0%	0.3%
	RBC	9.1%	7.9%	6.9%
	MIGEPF	0.2%	0.0%	0.0%
	MiniSante	0.1%	0.0%	0.0%
	NWC	0.0%	0.0%	0.0%
	MINALOC	0.0%	0.0%	0.0%
	MiniYouth	0.0%	0.0%	0.3%
	WASAC	0.0%	39.7%	39.9%
	MinEduc	0.0%	0.0%	0.0%
	<b>Subtotal</b>	<b>76.1%</b>	<b>67.5%</b>	<b>79.9%</b>
ENABLING ENVIRONMENT	Districts	75.3%	35.1%	46.8%
	RBC	8.8%	54.0%	47.8%
	MIGEPF	7.5%	0.0%	0.0%
	MinAgri	4.6%	0.0%	0.0%
	MiniSante	3.7%	0.2%	0.5%
	MinEduc	0.0%	0.0%	0.0%
	LODA	0.0%	0.2%	0.0%
	MINALOC	0.0%	0.2%	2.0%
	WASAC	0.0%	0.0%	2.3%
	NECDP	0.0%	0.0%	0.6%
	RAB	0.0%	10.2%	0.0%
	<b>Subtotal</b>	<b>14.0%</b>	<b>7.7%</b>	<b>4.0%</b>
<b>TOTAL</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>

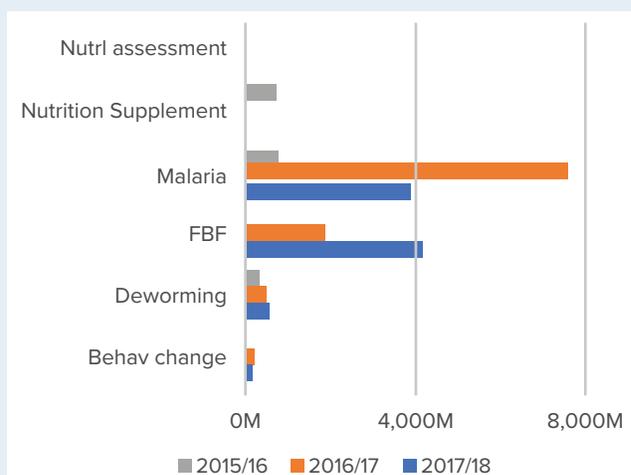
Source: Authors, based on MINECOFIN (2019)

### 3.1.1 Government Nutrition-specific Spending

**Most government nutrition-specific spending is on fortified blended food and malaria interventions.**

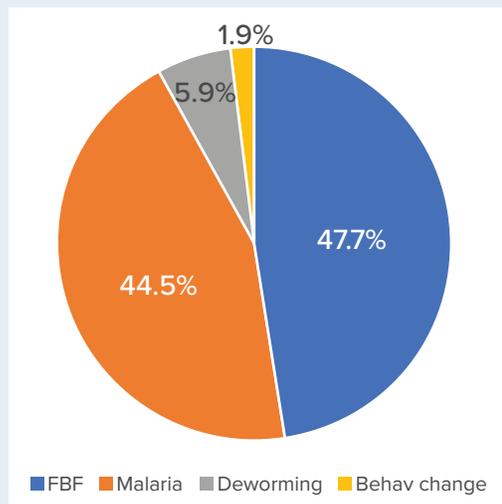
Nutrition-specific spending makes up between 10 to 25 percent of total nutrition-related spending, of which fortified blended foods (FBF) and malaria interventions together account for 92 percent. The government has significantly scaled up financing for these programs since FY16. While total spending on deworming has increased, the share dedicated to deworming decreased significantly. Deworming made up 18 percent of total nutrition-specific financing in 2016 but declined to less than 6 percent in 2018. There is limited public financing for behavior change activities. Figures 4 and 5 provide an overview of the type of interventions financed, and further details can be found in Annex 3.

**FIGURE 4: TREND IN FINANCING NUTRITION-SPECIFIC INTERVENTIONS, FY16-18**



Source: Authors, based on MINECOFIN (2019)

**FIGURE 5: PERCENTAGE OF NUTRITION-SPECIFIC INTERVENTIONS, FY2017/18**

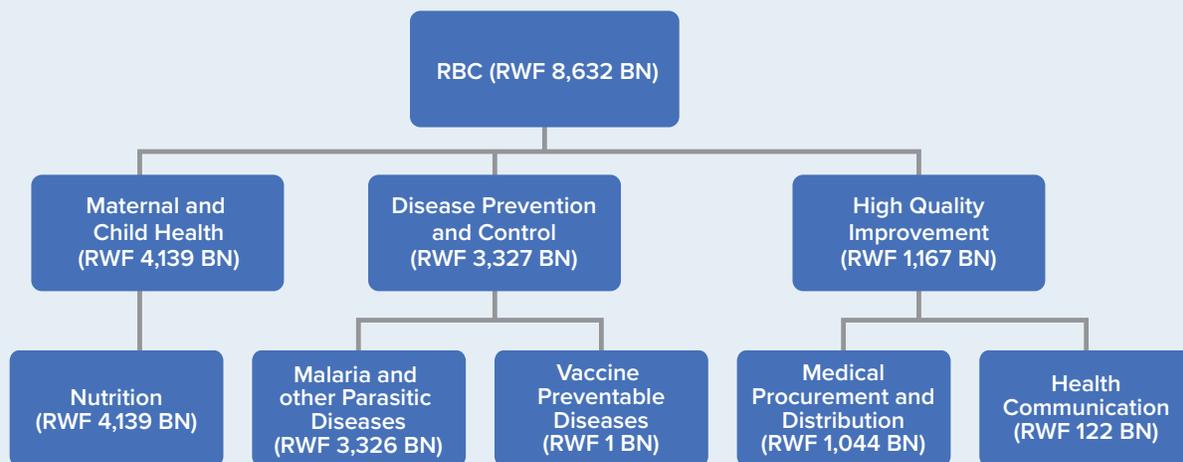


**The RBC manages 99.6 percent of funding for nutrition-specific activities (Table 6).** These are implemented through three programs and five sub-programs (Figure 6). This makes financial oversight of nutrition-specific activities relatively easy. It also reflects the limited range of activities actually financed by the government.

**The NECDP is responsible for financial management and distribution of fortified-blended food.** Until 2018, the RBC was responsible for the financial management of FBF provision while it was implemented through the NECDP. The NECDP produced the FBF purchase orders and the RBC procured. The FBF distribution chain was then managed by the NECDP through regular government medical supply chain mechanisms.<sup>39</sup> But this changed recently and now the NECDP has full responsibility for FBF procurement and financial management. This reduces the RBC's transaction costs but will require significant financial management capacity at the NECDP to effectively expand its mandate.

<sup>39</sup> The FBF was transported from the factory to 30 district pharmacy warehouses, and the district pharmacy was responsible for transporting and distributing it to all 492 health centers. The NECDP collaborated with the RBC and health centers to train beneficiaries in the preparation and appropriate use of the FBF. These training and distribution sessions also included antenatal care, immunization, and the provision of growth monitoring and promotion. Beneficiary eligibility is determined by sector administration using information on household socioeconomic status from the Ubudehe database. Beneficiaries are enrolled at health centers which also coordinate the distribution.

**FIGURE 6: NUTRITION-SPECIFIC PROGRAMMATIC FINANCING ARCHITECTURE, FY18**



Source: Authors, based on MINECOFIN (2019)

**Government spending on malaria has declined substantially despite increased incidence of the disease.**

Government spending on malaria is the second highest nutrition-specific expenditure item but declined by more than half between 2017 and 2018. This may be due to cyclical spending need (e.g. insecticide nets are only procured and distributed every 2-3 years). However, during the same time period there was a notable increase in confirmed anemia cases and the detection of severe malaria in pregnant women (Table 7). Malaria activities financed by the government include procuring medical commodities such as antimalaria drugs, insecticides, and larvicides, conducting quality assurance of antimalaria drugs, and indoor residual spraying.

**TABLE 7: MALARIA SPENDING AND MORBIDITY, 2017-2018**

	2017	2018
Malaria spending (RWF)	7,574M	3,860M
Anemia confirmed (cases)	5,995	6,032
Anemia Severe <7gm/dl (cases)	201	165
Malaria simple in pregnancy (cases)	32,873	27,156
Malaria severe in pregnancy (cases)	40	299
Malaria with minor digestive symptoms in pregnancy (cases)	691	461

Source: Authors, based on MINECOFIN (2019) and HMIS (2019).

**Other nutrition-specific intervention areas have received only limited or no support.** Funding for deworming is low given the need and has increased only marginally and at a slower pace than overall nutrition spending. Government spending on deworming has been less than RWF\$40 per child under 15 years old with an estimated coverage of over 12 million children annually (Table 8). Other critical nutrition-specific interventions received limited to no support, such as adolescent health and preconception nutrition, maternal dietary supplementation, breastfeeding and complementary feeding, dietary diversification, feeding behavior and stimulation, and treatment of severe acute malnutrition. Behavior change activities have not received significant support and make up less than 1 percent of total nutrition-specific spending by the government. As discussed in the methods chapter, it may be the case that there is some government spending on these interventions, but expenditure data are not sufficiently granular and are therefore thus not reported. Donor may also capture some of these items such as iron and folic acid. Additionally, some activities such as community dialogue at the local level require no explicit budget line, but are conducted and important and should therefore be recognized.

**TABLE 8: GOVERNMENT SPENDING ON DEWORMING, 2017/18**

Variable	2017/18
Number of children aged 1-15 years that received deworming tablets (annual)	12M
Deworming spending (RWF)	456M
Spending per child (RWF)	38
Deworming as percent of total nutrition spending	0.8%

Source: Authors, based on MINECOFIN (2019); HMIS (2019).

**Efficiency gains in spending are possible by shifting allocations towards high-impact interventions.**

Shekar et al (2017) estimated that the most cost-effective interventions for reducing stunting are vitamin A supplementation in pregnancy and infant and young child feeding (IYCF) nutrition counseling. However, the government only spent RWF 713 million in 2015/16 on these kinds of activities and discontinued them thereafter. Vitamin A supplementation is a donor financed activity, which allowed for continuation of coverage. Between 2015 and 2018, the government spent only about RWF 364 million on high-impact behavior change interventions, or 1.8 percent of total nutrition-specific spending across the three fiscal years. In contrast, the government spent RWF 5,977M on the public provision of complementary food, which accounted for 29 percent of total nutrition-specific expenditures across the three fiscal years. The cost for averting one stunting case is considerably lower when using vitamin A interventions rather than providing balanced energy supplements. Therefore, shifting investments from the public provision of complementary foods to other high-impact investments like vitamin A and IYCF interventions, is likely to increase the efficiency of nutrition spending (Table 9).<sup>40</sup> The production and provision of complementary foods is also justified through reported economy wide spillover effects that are not captured in such an allocative efficiency analysis.

<sup>40</sup> Shekar et al (2017).

**TABLE 9: GLOBAL COST-EFFECTIVENESS OF NUTRITION-SPECIFIC INTERVENTIONS FOR REDUCING STUNTING**

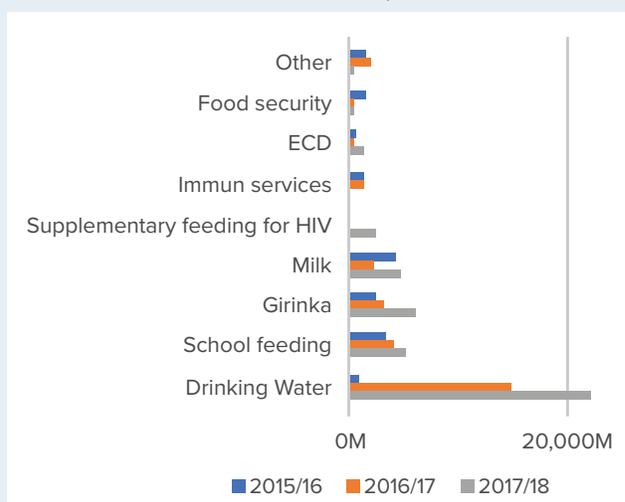
Intervention	Cost per case averted (US\$)
Balanced energy protein supplementation in pregnancy	29,949
Antenatal micronutrient supplementation in pregnancy	3,637
Public provision of complementary food for children	1,724
Intermittent preventive treatment in pregnancy (IPTp)	1,535
Prophylactic zinc supplementation for children	988
Infant and Young Child Nutrition (IYCN) counseling	467
Vitamin A supplementation in pregnancy	266

Source: Shekar et al (2017)

### 3.1.2 Government Nutrition-sensitive Spending

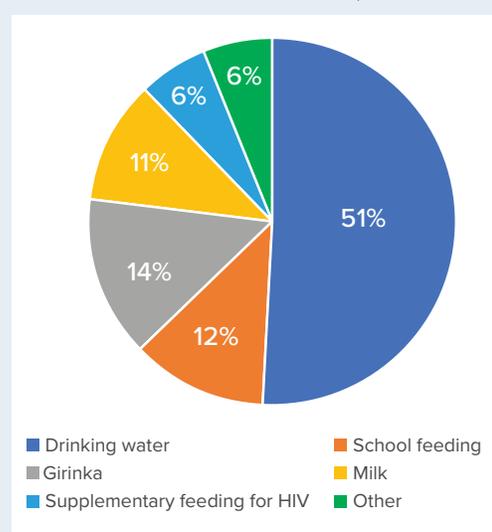
**The government has financed a diverse set of nutrition-sensitive activities.** The most prominent sensitive interventions are the provision of clean drinking water, the delivery of milk, school feeding initiatives, and the Girinka heifer program. While support for these efforts has increased quite rapidly since 2016, government spending on other nutrition-sensitive activities has remained stagnant or declined. For example, immunization support services made up 9 percent of total nutrition-sensitive spending in 2015/16, but the financing allocations for these services was reduced considerably by 2017/18. Immunization related activities are mostly financed through GAVI support. Spending on food security also decreased dramatically. While there has been an increase in supplementary feeding for HIV, it still only makes up a small share of total financing. Incentives aimed at encouraging CHWs to support nutrition activities are another important initiative that receives little to no financing allocations from the government (Figures 7 and 8).

**FIGURE 7: TREND IN FINANCING NUTRITION-SENSITIVE INTERVENTIONS, FY16-18**



Source: Authors, based on MinEcoFin (2019)

**FIGURE 8: SHARE OF NUTRITION-SENSITIVE INTERVENTIONS, FY2017/18**

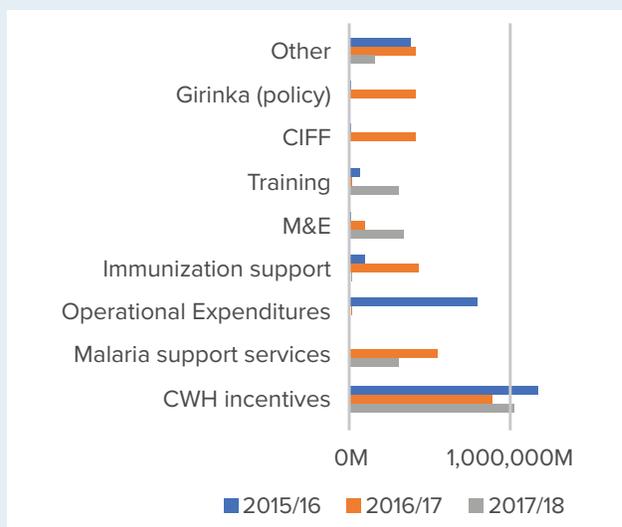


**Nutrition-sensitive interventions are implemented by many government agencies, which makes oversight and coordination difficult.** The vast majority of nutrition-specific activities are health interventions and are implemented by the RBC. Nutrition-sensitive activities are implemented by district authorities, the Ministry of Agriculture (MINIAGRI), the Ministry of Health, the Water and Sanitation Corporation (WASAC), the National Women’s Council (NWC), the Ministry of Education (MINEDUC), the Ministry of Youth (MINIYOUTH), the Ministry of Gender and Family Promotion (MIGEPROF), the Rwanda Agricultural Board (RAB), and the Rwanda Biomedical Centre (RBC). Across these agencies, financing for nutrition-sensitive activities is channeled through 29 programs and 54 sub-programs, considerably more than the three programs and five subprograms for nutrition-specific interventions. This makes it challenging for the NECDP to oversee and coordinate nutrition-sensitive activities, especially since agencies are not required to produce dedicated nutrition budgets and spending reports.

### 3.1.3 Government Investments in Enabling Nutrition Environment

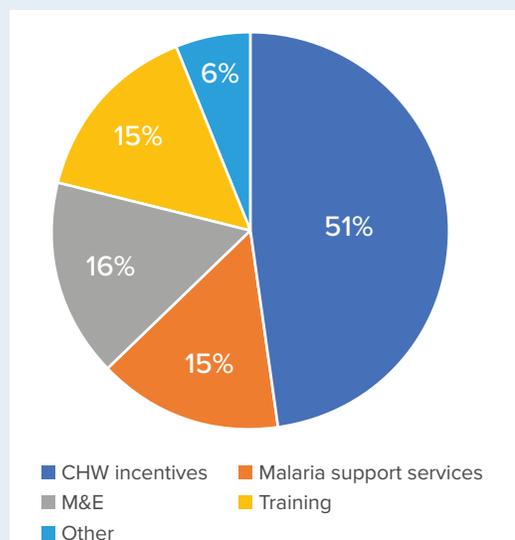
**Government spending on enabling environment investments makes up a small and declining share of total nutrition spending.** Enabling environment spending for nutrition has been halving each year since FY2016 and constituted only 4 percent of total nutrition spending in FY2018. This declining trend is concerning, given the urgent need for evidence-based decision making, financial management capacity, and better coordination across agencies. Enabling environment investments mostly consisted of CHW incentives but included a wide set of other activities such as training, monitoring and evaluation, malaria intervention support services, supervision activities, policy work and research, and nutrition coordination activities (Figures 9 and 10).

**FIGURE 9: TREND IN ENABLING ENVIRONMENT INVESTMENTS, FY2016-18**



Source: Authors, based on MinEcoFin (2019)

**FIGURE 10: SHARE OF ENABLING ENVIRONMENT INVESTMENTS, FY2017/18**

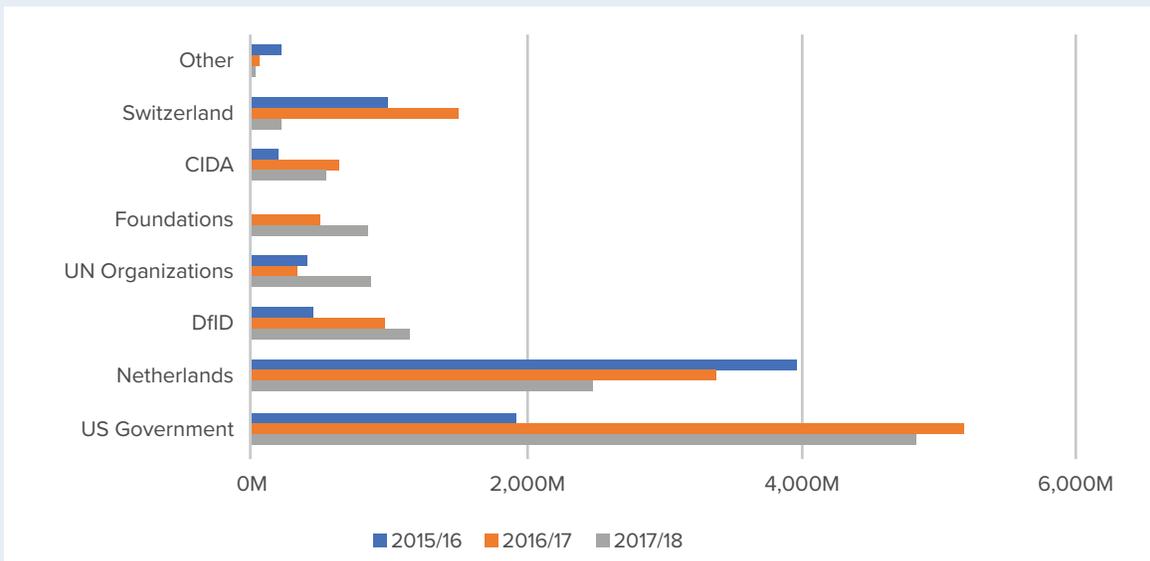


### 3.2 Development Partners’ Nutrition Expenditures

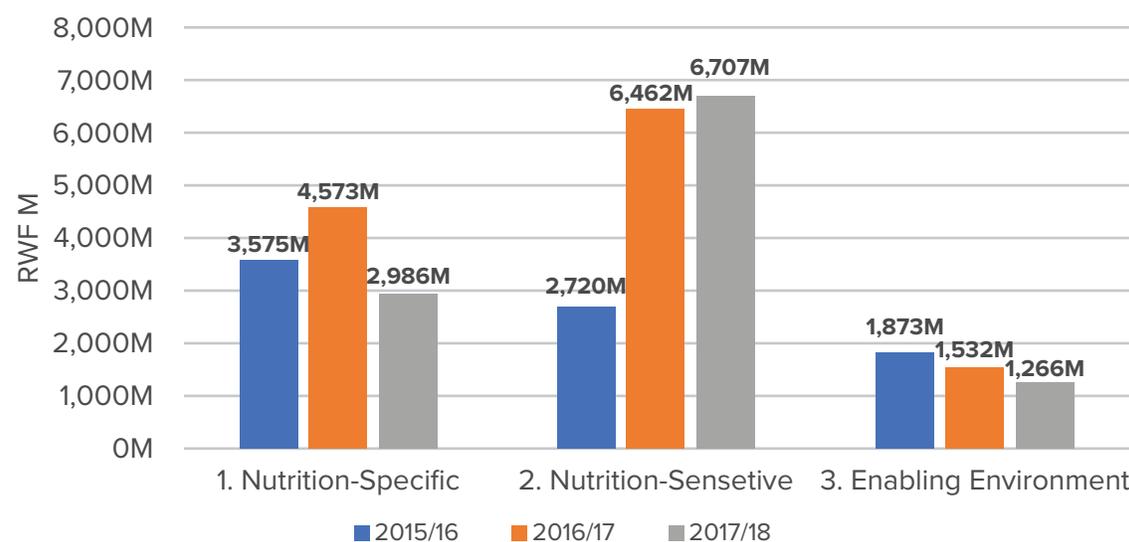
**There are 23 development partners supporting nutrition in Rwanda.** The three largest development partners are the US government, the Netherlands, and the UK’s DfID. Together, they contribute almost RWF10 billion (or 80 percent) of total donor nutrition-related support. While the US Government has more than doubled its support since 2015/16, the Netherlands have gradually reduced their funding. Financial contributions to nutrition from other partners have been comparatively small (Figure 11 and Annex 3). Coordinating a large number of development partners can be challenging and creates an administrative burden for the NECDP.

**Donor support is increasingly financing nutrition-sensitive interventions.** In the three years in question, development partners shifted their financing away from nutrition-specific towards nutrition-sensitive interventions. Nutrition-specific interventions dropped from 44 percent of total donor nutrition spending in 2015/16 to 27 percent in 2017/2018. Conversely, 61 percent in 2017/18 was dedicated to nutrition-sensitive interventions. Support for enabling environment interventions was steadily cut back from 23 percent to 12 percent of total support (Figure 12 and Annex 3).

**FIGURE 11: TRENDS IN DEVELOPMENT PARTNER FINANCING FOR NUTRITION, 2015-2018**



Source: Authors, based on NPER donor survey data.

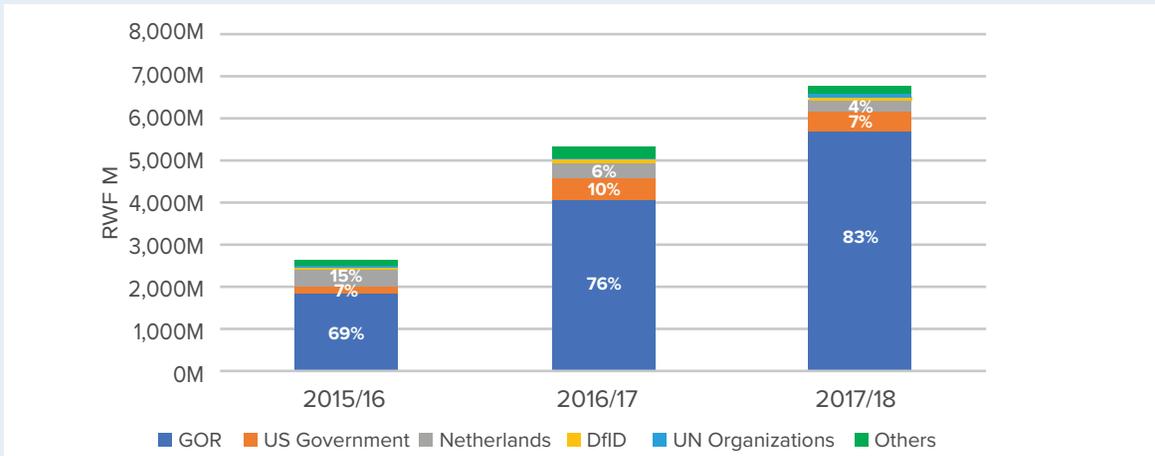
**FIGURE 12: BREAKDOWN OF DONOR NUTRITION FINANCING, 2015-2018**

Source: NPER donor survey data

### 3.3 Total Nutrition Spending

**Most nutrition spending is financed by the government.** By 2017/18, government spending amounted to 83 percent of total nutrition expenditures (RWF 67,451M). Government spending increased in nominal terms but also relative to donor contributions. Since 2015/16, the government share of total nutrition spending increased by a 14-percentage point margin. The largest development partners (the US government, the Netherlands, and the DfID) contribute around 15 percent of total nutrition spending (Figure 13). While it is important to ensure that government and donor funding complements each other, the increasing proportion of government funding over time reemphasizes the critical need for adequate allocation and use of this public spending on nutrition.

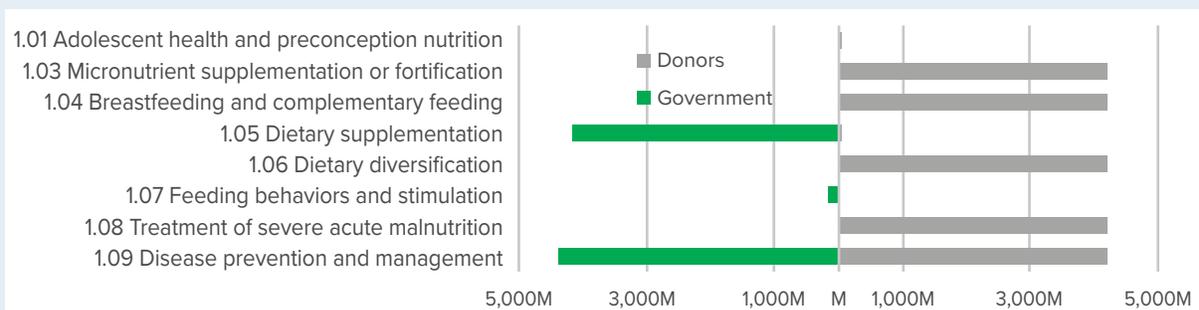
**FIGURE 13: TRENDS IN TOTAL NUTRITION SPENDING IN RWF AND IN PERCENTAGES OF TOTAL, 2015-2018**



Source: Authors, based Government FMIS and NPER donor survey data  
 Note: GOR = Government of Rwanda. DfID = UK Department for International Development. 'Others' includes Switzerland, Canada, NGOs, and foundations.

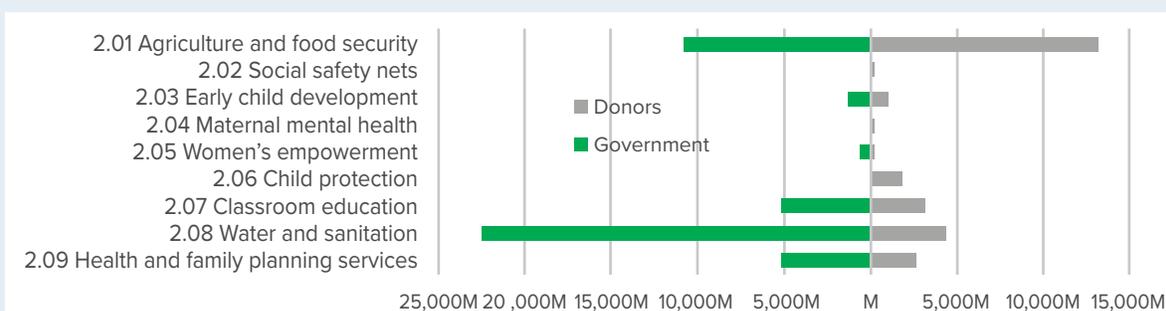
**There is considerable complementarity between government and donor nutrition spending.** Regarding nutrition-specific interventions, the government has focused on malaria and FBF interventions, while development partners have mainly focused on micronutrient supplementation and fortification (which the government has discontinued since FY2015/16). Although the World Bank’s support includes FBF financing, until now (February 2020) these funds have not yet been disbursed. The government’s nutrition-sensitive activities focus heavily on water and sanitation, while development partners have scaled up their support for agriculture and food security interventions. In terms of enabling environment investments, development partners have predominantly financed capacity building activities, while the government has focused on accountability incentives, regulation, and legislation (Figures 14 to 16). This complementarity is in general laudable, but relying entirely on development partner support for certain activities presents a risk.

**FIGURE 14: COMPLEMENTARITY OF GOVERNMENT AND DONOR NUTRITION-SPECIFIC SPENDING, FY2017/18 IN RWF MILLION**



Source: Authors, based on government FMIS and NPER donor survey data.

**FIGURE 15: COMPLEMENTARITY OF GOVERNMENT AND DONOR NUTRITION-SENSITIVE SPENDING, FY2017/18 IN RWF MILLION**



Source: Authors, based on government FMIS and NPER donor survey data.

**FIGURE 16: COMPLEMENTARITY OF GOVERNMENT AND DONOR ENABLING ENVIRONMENT INVESTMENTS, FY2017/18 IN RWF MILLION**



Source: Authors, based on government FMIS and NPER donor survey data.

### 3.4 Identifying Appropriate Combination of High Impact Interventions Through Optima Modelling

**Different scenarios help identify how nutrition outcomes would vary depending on a choice of high-impact interventions.** In the analysis, the Optima Nutrition model was used to consider optimizing according to the following three objectives:

- (i) Increasing the number of alive, non-stunted children
- (ii) Increasing the number of alive, non-stunted, and non-anemic children; and
- (iii) Increasing the number of alive, non-stunted children and non-anemic children and minimizing anemia and mortality among pregnant women.

Each scenario compares the baseline (continuing current spending) against what spending would look like to optimize outcomes according to the respective objectives. In all scenarios, it is assumed that coverage of interventions for family planning, long-lasting insecticide treated bed nets (LLIN), delayed cord clamping, kangaroo mother care, treatment for pre-eclampsia, treatment of eclampsia, and treatment of severe acute malnutrition (SAM) cannot be reduced from their baseline values, effectively limiting the available budget to that estimated for all other

interventions. The interventions and their coverage of target populations and unit cost are presented in Table 10.<sup>41</sup> Coverage shows the percentage of the target population receiving the intervention at baseline. Unit costs are estimates based on stakeholder interviews. Costs were not calculated using the nutrition expenditure analysis presented in the previous chapter as more detailed data would be needed to identify high impact interventions.

**TABLE 10: COVERAGE AND ESTIMATED UNIT COST OF HIGH-IMPACT NUTRITION INTERVENTIONS IN RWANDA**

High-Impact Nutrition Interventions	Coverage	Estimated Unit Cost (US\$)
Magnesium sulphate for treatment of pre-eclampsia	20%	147.8
Magnesium sulphate for treatment of eclampsia	20%	147.8
Treatment of severe acute malnutrition	92%	147.7
Nutrition-sensitive direct support	0%	120.0
FBF for children 6-23 months	28%	115.0
FBF for pregnant women	8%	58.2
Infant and young child feeding education (IYCF)	17%	5.2
Delayed cord clamping	50%	3.2
Kangaroo mother care	50%	3.0
Long-lasting insecticide treated bed nets (LLIN)	64%	2.6
IFA supplements in pregnancy	3%	1.1
Family planning	28%	1.0
ORS and Zinc for treatment of diarrhea	0%	0.8
Vitamin A supplementation for children	93%	0.4

Note: See Table 3 on data sources for “coverage of target population”

**Baseline: No change in the level and allocation of nutrition spending would result in no significant reduction in stunting.** Under this baseline scenario, it is estimated that a cumulative 751,000 children under 5 years of age will be stunted, 152,000 children will die, 325,000 children will have anemia, 273,000 pregnant women will have anemia, and 5,000 pregnant women will die (Table 11).

**Scenario 1: Maximizing the number of alive, non-stunted children would require reallocating spending towards IYCF and vitamin A supplementation.** Activities listed under flexible funding<sup>42</sup> would be allocated 97 percent and 3 percent of funding respectively, while fixed allocations (which are non-negotiable and cannot be adjusted) would stay the same. This would reduce the number of stunted children by 7 percent, but the number of child deaths and anemic children would increase by 2.5 percent and 18 percent, respectively (Table 11).

<sup>41</sup> Total spending on high-impact interventions based on bottom-up Optima modelling is estimated at US\$20 million.

<sup>42</sup> It is assumed that coverage of interventions for family planning, long-lasting insecticide treated bed nets (LLIN), delayed cord clamping, kangaroo mother care, treatment for pre-eclampsia, treatment of eclampsia, and treatment of severe acute malnutrition (SAM) cannot be reduced from their baseline values – these are treated as non-negotiable and fixed. Flexible funding categories include FBF for pregnant women, nutrition-sensitive direct support, IFA supplements in pregnancy, infant and young child feeding education, FBF for children 6 to 23 months, vitamin A supplementation for children, and ORS and zinc for treatment of diarrhea.

**Scenario 2: Maximizing the number of alive, non-stunted children, and non-anemic children would require prioritizing spending on micronutrient powders, IYCF, and vitamin A supplementation.** Flexible funding would be allocated 49 percent, 48 percent, and 3 percent respectively, while fixed allocations would stay the same. Compared to baseline, this would result in 2 percent fewer stunted children and 21 percent fewer anemic children, but a moderate increase (0.8 percent) in child deaths (Table 11).

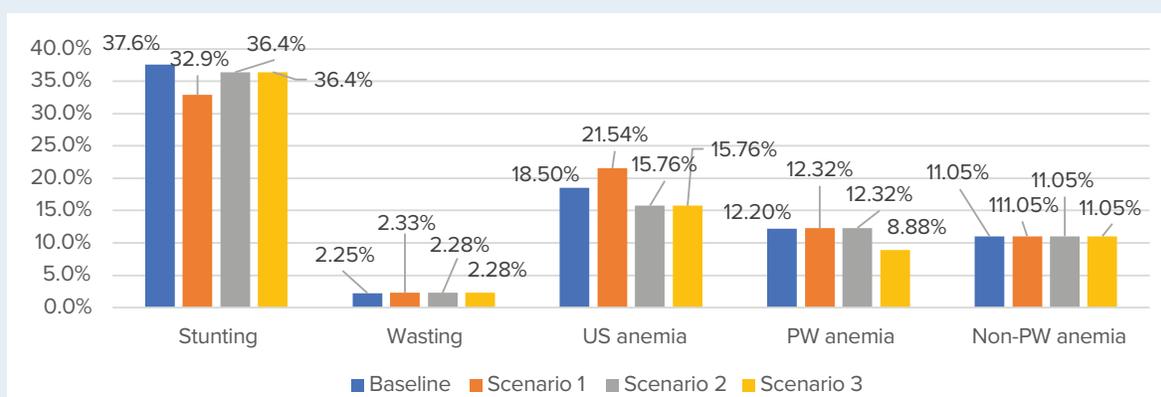
**Scenario 3: Maximizing the number of alive, non-stunted children, non-anemic children and minimizing the number of deaths and anemia among pregnant women would require prioritizing spending on micronutrient powders, IYCF, vitamin A supplementation, and iron and folic acid supplementation for pregnant women.** Flexible funding would be allocated at 49 percent, 47 percent, 3 percent, and 1 percent respectively, while fixed allocations would stay the same. Compared to baseline, this would result in 2 percent fewer stunted children, 16 percent fewer anemic children, 4 percent fewer maternal deaths, and 27 percent fewer anemic women. All three scenarios suggest that IYCF and vitamin A supplementation should be prioritized because of their relative cost effectiveness (Table 11).

**TABLE 11: OPTIMIZATION SCENARIO RESULTS, 2020 - 2024**

Number	Baseline	Scenario 1	Scenario 2	Scenario 3
Stunted children <5	751,349	698,417	737,432	738,013
Child deaths	152,477	156,213	153,771	153,686
Children <5 with anemia	324,765	384,016	271,077	271,077
Pregnant women with anemia	273,407	276,169	276,169	199,000
Pregnant women deaths	5,085	5,092	5,092	4,897

**Scenario 3 is the optimal scenario.** Scenario 3 achieves the best outcomes on all indicators except for the stunting effect in scenario 1 (Figure 17). In scenario 1, stunting declines significantly more than in the other scenarios given the focus on IYCF. However, scenario 1 performs poorly in other dimensions, especially wasting and under-5 anemia as these would not be prioritized. The prevalence of anemia among children under 5 and anemia among both pregnant and non-pregnant women decline only in scenarios 2 and 3.

**FIGURE 17: PROJECTED PROGRESS IN NUTRITION INDICATORS BY 2024**





## 4. Institutions and Public Financial Management Arrangements

**Nutrition requires a whole of government approach focusing on coordination and implementation.** As this study shows, several government agencies, programs, and sub-programs are involved in managing and financing Rwanda's nutrition interventions. The NECDP has the responsibility for setting policy and coordination. The NECDP provides guidance during the planning and budgeting phase to ensure that nutrition-related activities of all agencies are prioritized and aligned with the NECDP's national strategic plan. The NECDP also has the mandate to oversee the implementation and financing of nutrition-related activities across the budgets of all agencies and all levels of government. This institutional context poses challenges for effective coordination and implementation. To implement this mandate, the NECDP will need a nutrition-responsive public financial management (PFM) system to monitor and coordinate nutrition expenditures across different level of government, and against nutrition policy objectives.

**The 2019 Nutrition Policy and the NECDP's Strategic Plan are not fully aligned, and information on outcomes and expenditures is not regularly published.** The policy documents do not clarify institutional arrangements. They do not define what nutrition activities should be prioritized by whom and what indicators and targets should be used to measure progress. Also, no cost estimates of the NECDP's Strategic Plan are available. Costing of the action plan is currently ongoing, and should eventually makes it possible to identify a financing gap and to allocate responsibilities among the financing partners. In the absence of data the NECDP cannot assess progress against objectives. And it cannot produce evidence to publish annual reports on nutrition outcomes. It also limits any adjustments to strategic resource allocation, or arguments for an increased budget allocation for nutrition from the government and development partners. Furthermore, while development partners make up an important share of total nutrition financing, they are not required to report their actual nutrition expenditures to the NECDP. This means that the NECDP does not have a full picture of nutrition financing in Rwanda.

**The government's budget classification structure is not sufficiently granular to monitor nutrition-related expenditures.** There is no common nutrition-related segment in the budget classification structure against which agencies could budget. The nutrition sub-program only partially captures nutrition-specific activities in the health sector, which is insufficient. The budget circular currently provides no guidance on how to treat nutrition in the budget, and there is no other process in place to identify nutrition-relevant activities during the budget formulation process. As a result, NECDP has no oversight of what nutrition related activities are budgeted for across agencies and it cannot produce comprehensive nutrition budget execution reports. The NECDP would need full oversight over which government agencies budgeted for what nutrition activities, when funds have been released for these activities, what the implementation process is for each activity, and what the future cash flow requirements are. Currently this information is not available to NECDP.

**Decentralized administrative entities (districts, sectors, and cells) play a critical role in ensuring that national priorities are implemented on a local level.** Implementation of nutrition related activities at the district level is guided and coordinated by the District Plan to Eliminate Malnutrition (DPEM). While DPEMs have been rolled out across all 30 districts, their effectiveness is limited. The role of administrative entities in coordinating, implementing, and monitoring nutrition activities is not formalized, and there is limited planning and budgeting capacity. Furthermore, arrangements for decentralization vary by sector and roles. Responsibilities amongst actors at

<sup>43</sup> Annex 2 includes a more detailed assessment of the nutrition policy environment in Rwanda.

<sup>44</sup> Annex 2 presents more detail on how the policy environment informs the budget formulation process.

decentralized levels are sometimes unclear leading to overlapping functions with limited accountability mechanisms. District capacity for coordination and oversight is affected by insufficient budget provisions. Plans are in place to establish a human development officer at the cell level, which would alleviate some of these bottlenecks.

**Coordination and implementation in this institutional context can be facilitated by linking policy and plans with the government budget management system.** A nutrition sensitive PFM system would enable NECDP to monitor budget releases across all agencies against appropriations, to follow up on delays, and provide a cash flow requirement forecast against the funding source for activities that remain outstanding. It would also capture actual expenditures on nutrition interventions as well as performance data to allow policy makers to reallocate spending according to performance in order to generate greater value for money. The current PFM system only partially meets these requirements.

**Rwanda could become a pioneer on mainstreaming nutrition activities into the budget.** Globally, several governments – including Rwanda – introduced gender and environment into their budget. Rwanda’s 2020/21 budget circular already specifies the need for environment, climate change, and gender to be mainstreamed. A nutrition responsive budget has so far not yet been developed, although this would in principle be similar to gender and environment responsive budgeting. Based on the detailed expenditure analysis presented in this report, Rwanda could become a global pioneer by setting up a nutrition tagging process in the budget. It could develop a dedicated nutrition budget, set up mechanisms in the FMIS to monitor releases for nutrition related activities and produce dedicated comprehensive nutrition budget execution reports. This will take a whole of government approach and provide NECDP the stewardship and coordination function necessary to realize NECDP’s medium-term Strategic Plan. This approach could be informed by lessons from other countries with gender budgeting such as Sweden or Canada (Box 4).

#### **BOX 4: LESSONS FOR NUTRITION FROM GENDER BASED BUDGETING IN SWEDEN AND CANADA**

**Mainstreaming gender into the budget in Sweden:** Nutrition responsive budgeting could be adopted based on the lessons learned from gender budgeting. Nutrition and gender budgeting are similar in that they span across many sectors, which can be a planning and budgeting challenge for governments. The Government of Sweden has adopted gender budgeting as one of its key priorities. To encourage gender-sensitivity, it issued a clear directive in the annual budget circular requiring ministries and agencies to consider gender aspects throughout the budget process, to set gender-disaggregated targets, and to produce gender impact assessments of policy proposals.

**Introducing performance information to the budget in Canada:** The 2019 budget for Canada includes a “Gender Equality Statement.” This summarizes gender equality challenges such as “boys are less likely to complete high school than girls” or “women are less likely to pursue studies in architecture, engineering, and mathematics than men.” The budget then takes measures aimed at addressing these challenges such as expanding funding for the post-secondary student support program or engaging girls as well as boys in STEM and introducing them to opportunities for developing their critical skills. A similar approach could be taken in nutrition. Critical performance information is already collected in most countries. There is a broad recognition that outcome and performance data should inform the choice of activities in the budget proposal.

Source: Government of Sweden and Government of Canada, adapted from PEFA gender module.

## 5. Conclusion and Recommendations

This is the first Nutrition Expenditure and Institutional review of Rwanda's nutrition interventions. The analysis identifies several areas in nutrition financing, management and interventions to address to ensure that overarching objectives of reduced stunting will be achieved. Overall the analysis finds that government spending on nutrition is well below what is necessary to reach the strategic target of 19 percent stunting among children under the age of 5 by 2024. The government spends about US\$36 per child under the age of 5 on nutrition-related activities, of which about US\$5.8 is for nutrition-specific activities. This amount is far below the recommended US\$10 per under-5 child to provide a comprehensive package of nutrition interventions. Government spending at 2.5 percent on nutrition and 0.4 percent on nutrition-specific activities represents a small share of total government spending. This share is also low in comparison to other low-income countries.

**Most government spending on nutrition is for nutrition-sensitive activities, FBF and malaria interventions.**

Nutrition-sensitive spending is currently estimated at about 63 percent, and covers interventions supporting the provision of clean drinking water, the delivery of milk, school feeding initiatives, and the Girinka heifer program. Nutrition specific spending is made up almost entirely (93 percent) of FBF and malaria interventions. Increased value for money could be achieved by spending more on high-impact nutrition interventions, such as vitamin A supplementation. There are few enabling environment investments to help the NECDP to function effectively. Government expenditure reports do not allow for a sufficiently detailed breakdown of spending in key areas, which makes it difficult to identify high-impact nutrition interventions from expenditure reports. To ensure evidence-based decision making, investing in reliable data and analysis should be a priority for the government.

**Donor spending on nutrition is limited.** The Rwandan government financed 83 percent of total nutrition expenditure in 2018. Development partners contributed the remaining 17 percent. The government has to coordinate 23 different partners, which is an administrative challenge. Donors mainly finance nutrition-sensitive activities and have reduced their funding for enabling environment investments.

**Institutions and public financial management system need to be adjusted to be nutrition-responsive.** The nutrition policy environment is fragmented, and clarity on roles and responsibilities across levels of government is lacking. The capacity for coordination and implementation at local levels is limited. Nutrition-related activities in the budget are not sufficiently prioritized, and they are not easily identifiable. The NECDP does not have access to or oversight over nutrition-related activities and spending across all government agencies and development partners. Furthermore, the management of implementing agencies for nutrition interventions is compromised by insufficient accounting and reporting structures.

The Rwandan government and NECDP are committed to address these challenges. To support the government in these efforts, the following recommendations are offered. In addition, this report draws relevant lessons to further develop the methodology for nutrition expenditure analysis.

### **Increasing the effectiveness of spending in Rwanda**

- Increase government spending on nutrition-specific interventions to the recommended US\$10 per under-5 child to ensure a comprehensive package of nutrition interventions.
- Focus nutrition spending on high-impact and cost-effective interventions such as vitamin A supplementation in pregnancy and IYCN counseling to reduce stunting.
- Plan nutrition activities with sufficient amount of detail to allow for clear identification and monitoring of high-impact nutrition intervention in the budget. For example, spending information should differentiate between management of acute malnutrition and prevention and management of micronutrient deficiencies. This will allow better prioritization in future budget allocations.
- Invest in enabling environment activities for nutrition such as data collection, capacity building, and ICT infrastructure.

### **Strengthen institutional and public financial management arrangements in Rwanda**

Recommendations on institutional and public financial management arrangements are structured around 4 pillars following basic PFM processes. They enable prioritization of high-impact interventions, strengthen the NECDP stewardship and coordination mandate, and facilitate accountability amongst all stakeholders. Recommendations are informed by the gender budgeting literature and OECD country experience (box 4).

#### ***Pillar I: Strengthen Institutional Arrangements and Prioritize Spending.***

- Formalize the roles and responsibilities of decentralized administrative entities in the nutrition engagement. This includes their mandate to coordinate, implement and monitor nutrition services. It will require strengthening their management capacity.
- Build the procurement function and capacity of the NECDP in light of its updated mandate to procure fortified blended food.
- Prioritize interventions in the NECDP Medium-Term Strategy to identify a package of evidence based high-impact nutrition interventions. This would help sector ministries and agencies as well as decentralized entities to develop evidence-based and prioritized budget proposals.
- Costing the prioritized package of interventions would help determine what resources are necessary to achieve certain targets, identify the financing gap, and allocate responsibilities among partners. Interventions should be tagged in the budget, and progress monitored.
- Simplify the policy environment. Key language should be aligned in all policy documents (and ultimately in the budget) to prevent multiple and overlapping priorities and objectives.<sup>45</sup> Activities, intervention areas, indicators and targets across the Nutrition Policy, the NECDP medium-term strategy, and Single Plan of Action should be simplified and aligned. Resources can then be matched to objectives and performance, to strengthen accountability.

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<sup>45</sup> Annex 2 shows the current fragmented nutrition policy environment and how the various documents relate to one another.

### *Pillar II: Develop a Nutrition-Responsive Budget.*

- Identify nutrition-related activities in the budget proposal. This can be achieved in one of two ways: (i) introducing a nutrition-dedicated segment in the chart of accounts or (ii) identifying nutrition-related activities in the budget proposal (through their unique ID) and setting up tailored cross-walk tables for the NECDP. The second option may be more practical and avoid reforming the chart of accounts. Identification of nutrition in the budget will require clear definition on what constitutes nutrition activities across the various ministries and implementing agencies.
- Issue guidance (MINECOFIN in close collaboration with the NECDP) to line ministries on how to tag nutrition activities into the budget. This could be similar to how guidance is issued for climate change or gender activities in the budget.
- Development partners should be encouraged to participate in the budget preparation process and identify the nutrition activities (from the financing gap in the NECDP's costed medium-term strategic plan) that they intend to finance in the upcoming budget year. This is necessary such that the budget is comprehensive of all sources and allows for well-informed and strategic decision making. Better use of the government's FMIS by partners would allow for more accurate and timely information as well as more comprehensive budget execution reports. A dialogue and roadmap of how this can be facilitated without giving up fiduciary safeguards should be pursued. Some development partners, such as GAVI, WHO, UNICEF, and UNFPA, already put their activities on-budget but execute them through their own protocols.

### *Pillar III: Adjust Budget Execution Processes*

- Make necessary adjustments in the government's FMIS to allow reading rights for NECDP to monitor budget provisions and implementation progress for nutrition related activities across relevant sectors. This may require a portal in the FMIS or a dashboard (building on a crosswalk table) to be able to access budget release and spending figures in real-time.
- Develop customized budget execution reports for nutrition related activities across all agencies in the FMIS. These should be automated and based on how the budget was tagged.
- Capture all donor spending in budget execution reports to ensure these are comprehensive of all financing sources. This includes off-budget spending from development partners. Integrating these with government budget execution reports can only be done if the same accounting methods are used. Development partners should be encouraged to transition towards using the government chart of accounts for reporting-purpose, as these already follow international best practice and are IMF compliant. Development partners may still use a parallel financial management information system for their own purposes. But producing reports that are formatted in the same way as government systems will help developing comprehensive budget execution reports that cover all sources of funds for nutrition.
- Agencies and spending units that implement nutrition activities should be clearly captured in budget execution reports, to facilitate stewardship by NECDP over implementation of nutrition-related activities.

### ***Pillar IV: Capture Nutrition Outcomes to Inform the Formulation of Nutrition-Responsive Budgets.***

- Triangulate performance information with spending information. To assess progress towards objectives in the NECDP's medium-term strategic plan, information on outcomes is needed as well as comprehensive expenditure information. The FMIS already has the necessary functionality to capture outcome indicators. These are compiled from other sources such as the HMIS which can be fully used. Progress reports containing these indicators could be presented to parliament and civil society. They can also be used to inform the nutrition-responsive budget formulation process.

#### **Continue analytical work**

- Costing the NECDP's Medium-Term Strategic Plan will help identify the funds needed to achieve the government's nutrition targets. The domestic budget for nutrition should be based on this costing. This would also be the basis for a dialogue with development partners to fill the remaining gap.
- Conduct an allocative efficiency analysis based on expenditures for specific nutrition interventions. Results will help targeting of nutrition resources to the most cost-effective interventions.
- Identify spending patterns on nutrition-specific interventions in hospitals, health facilities, and ECD centers. These patterns may provide valuable information to help the NECDP, the RBC, and the MOH facilitate better coordination and achieve efficiency gains.

#### **Methodological improvements for nutrition expenditures analysis**

The methodology for nutrition expenditure analysis could be further developed and aligned based on the lessons from this report:

- A standardized way of classifying nutrition-related interventions in analysis should be applied. The 2013 Lancet Framework (Figure 1) is a sound theoretical model that could be used. Activities need to be mapped against the categories in the Lancet Framework, including activities for country-specific expenditures (such as the Girinka program in Rwanda).
- Financing indicators related to nutrition should be reported across all studies to allow comparisons: (i) government nutrition spending as a percentage of general government expenditure; (ii) government nutrition-specific spending as percentage of general government expenditure; (iii) government nutrition-specific spending as percentage of government health expenditure; (iv) government health expenditure as a percentage of general government expenditure; (v) government nutrition spending per each child under the age of 5 in current US dollars; and (vi) government nutrition-specific spending per each child under the age of 5 in current US dollars. Trends in the relative shares of nutrition-specific, nutrition-sensitive, and enabling environment investments should be reported over time, as well as the level of government spending compared to that of external partners.
- Studies need to clearly document their methodological approach and provide sufficient detail for the reader to be able to determine whether the estimates provided are comparable to those of other countries.
- The lowest level of expenditure information available should be used to report on nutrition-related activities. Relying only on data from government agencies or programs (such as the nutrition sub-program in Rwanda) is unlikely to yield sufficient meaningful information. Whatever classification is chosen (lowest level of expenditures, agencies, or spending programs), the data need to be consistent.

- There is no underlying theory for weighting expenditure and no clear rationale. Hence it is likely to be subjective and used erroneously in comparisons. It is more helpful for sensitivity analysis within local contexts to provide apportioned nuance.
- The nutrition-responsiveness of the PFM environment should be assessed in the expenditure review.
- Development partner data should be included in the analysis. These should be classified following the same categories used to classify government expenditures. Any assessment of allocative efficiency should consider the unit cost of the intervention to government.
- If the Optima model is used to inform allocative efficiency, these estimates should be interpreted carefully. Optima baseline estimates are hypothetical and based on mathematical modelling, which could differ substantially from the government's actual expenditure reporting. Optima results will be meaningful if high-impact interventions can be fully identified in government and donor expenditure reports. If not, it is difficult to make reliable recommendations about how best to reallocate funds. Providing concrete recommendations to government and donors on spending adjustments may be difficult as the modelled scenarios are estimates, and not based on the same terms as the government or donor expenditures.

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# Annex 1:

## Coding of all nutrition-related activities in the government budget

Intervention Area	Types of Activities Included
<b>Nutrition-specific Interventions</b>	
Behavior change (Nutrition-specific)	1000 Days Campaign, produce and broadcast TV/ radio spots/ talk shows, banners and billboards, dissemination of health activities through media channels, community outreach campaigns on nutrition/ IEC/ 1000 days, orientation workshop for local authorities/ journalists/ parents
Deworming	Mass drug administration for children 1-15 years; NTD surveillance and case management; management of NTD drugs; MDA to target population; training health providers on NTDs; training/ implementation follow-up on diagnosis and NTD management; cure rate of patients; case management protocols for health facilities;
FBF <sup>46</sup>	Purchase and distribute fortified blended food
Malaria Interventions	Fight against malaria; procurement and distribution of insecticides/ malaria tests/ malaria drugs; IRS operation in targeted districts/ sectors; procure malaria medical commodities; QA/ QC of antimalaria drugs; malaria epidemiological maps.
Nutritional Assessment	Conduct routine weight, height and MUAC screening; manage malnutrition cases for children < 2 years; equip health facilities with anthropometric tools.
Nutrition Supplement	Procure nutrition commodities (RUTF, CSB, ONGERA, Vitamin A, F 100, F75, Resomal); vitamin A supplements to children aged 6-59 months; Supply of Vitamin A, iron, and folic acid for pregnant women.
<b>Nutrition-Sensitive Interventions</b>	
Behavior change (Nutrition-sensitive)	Production/ printing of social mobilization messages on immunization; quarterly radio sessions on family planning; radio programming on communicable and non-communicable diseases.
CHW incentives (Nutrition-sensitive)	Provide CHW with incentive payments during integrated mother and child health week; performance incentives for increased assisted deliveries; performance incentives for high immunization coverage.
Clean drinking water	Construction of water supply system; clean water supply to households; water treatment plants; public works; supervision; expropriation; salaries for implementation staff; construction of water pipelines; rehabilitation and extension of water pipelines; construction and rehabilitation of boreholes;
ECD	Develop minimal ECD standards, training of parents/ community on ECD, establish ECD centers, equip ECD centers with equipment and materials, provide improved WASH services in ECD centers/ schools; support children from needy families

<sup>46</sup> The Shisha Kibondo Fortified Blended Food Program (FBF) is a venture between the Government of Rwanda and Africa Improved Foods Ltd (AIF) aimed at manufacturing highly nutritious fortified food and supplying it to poor families in Ubudehe 1 and 2 with children between 6 to 24 months old, pregnant women, and breastfeeding mothers. The Ministry of Health has handed over nutrition activities to the NECDP. 25.04.2018. [http://www.rbc.gov.rw/index.php?id=19&tx\\_ttnews%5Btt\\_news%5D=415&-chHash=61006745d914a4008bc966c975ce6f9e](http://www.rbc.gov.rw/index.php?id=19&tx_ttnews%5Btt_news%5D=415&-chHash=61006745d914a4008bc966c975ce6f9e)

Intervention Area	Types of Activities Included
Family Planning	Procure IUD kits/ tubal ligation kits/ FP commodities/ equipment, build capacity of FP providers, sensitization of local leaders in civil society organizations, ensure access to FP commodities in youth friendly centers/ FP training at health facilities, CHW training on FP, mentorship on PFP/ FP, mass media campaign on FP, promote condom use.
Food security	Conduct household baseline survey, increase access to sweet potato materials for households, food security and nutrition monitoring survey, fertilizer to increase nutrient availability for crops, comprehensive food security and vulnerability analysis; post-harvest storage and handling; eliminate malnutrition through agriculture.
Girinka	Purchase and distribute cows; purchase and distribute small livestock, assistance to vulnerable groups; follow-up, animal husbandry-related services, vaccinations, insemination, intensive agriculture and livestock production, purchase of inputs, training of beneficiaries, improved coordination/ monitoring of program, veterinary materials;
Girls' education	Support for girls' education program, personal hygiene products, school hygiene, purchase of equipment for girls, stakeholder workshop.
Immunization support	Purchase vaccines/ vaccine devices; vaccine procurement; vaccine insurance; purchase of stool sample containers; biopsies; urine sample collection
Kitchen gardens	Mobilization campaign on kitchen gardens; construction/ development/ promotion of kitchen gardens; purchase inputs (vegetable seeds); training of farmers and households on vegetable production/ preparation of kitchen gardens.
Milk	Purchase milk; distribute milk to health centers; provide milk to malnourished children under 5 years old; monitoring and follow-up of milk program activities
Reproductive health	Demand-side incentives for reproductive health; mass media/ BCC campaigns and outreach activities on HIV/ GBV/ STIs/ FP; organize community-based dialogues; pregnancy test and recording; training of healthcare providers on FP/ reproductive health/ ASRH/ youth-friendly services; production of IEC materials; mentorship on ASRH implementation; Produce mass media tools (radio, adverts, magazines) for HIV/ STI, GBV, right to health, integrated FP;
Sanitation	Conduct household hygiene and sanitation assessment at village level; reinforce water quality, food safety, injection safety, and healthcare waste management; purchase and distribution water filters to vulnerable families; printing of Community-Based Environmental Health Promotion Program tools
School feeding	Pay school feeding in schools/ boarding schools/ secondary schools/ 9&12YBE schools; Distribute/ Disseminate school feeding; school hygiene and environment; Transfer school feeding funds
Supplementary feeding for HIV	Procure and provide SOSOMA/ RUTF/ SDB+ for malnourished HIV patients
VUP	Minimal package; minimum package for asset transfers, for caseworkers, for graduation

Intervention Area	Types of Activities Included
WASH (secondary schools)	Strengthen school hygiene and environment in secondary schools; purchase handwashing equipment for secondary schools; improve hygiene and environment activities in secondary schools; mobilize environmental and hygiene clubs in secondary schools
Women's empowerment	Provide market information to women-dominated groups and cooperatives; identify and mobilize vulnerable women to join cooperatives; conduct needs assessment; provide training in technical and project management skills to women in cooperatives
<b>Enabling Environment Interventions</b>	
CHW incentives	General performance incentives to CHWs/ CHW cooperatives, support CHW cooperatives, mobilization of health promotion by CHWs.
CIFF (Childhood Stunting Projects)	Support local NGOs; provide communication fees and salary to staff; refund misused budget funds.
Coordination	Quarterly integrated nutrition coordination meetings; workshop for stakeholder engagement; district coordination meetings on MCH data; implementation plan for community hygiene clubs; monitor/ coordinate JAPEM; support district-level DPEM coordination committees; procure nutrition support; CHW coordination.
Food security (research)	Farm experiments to monitor pest/ disease incidence and crop loss; field surveys on cropping seasons; agricultural extension activities increased; increasing seed productivity.
Girinka (Policy)	Monitoring of Girinka decentralization; follow-up on Girinka decentralization; planning and implementation of Girinka week/ fundraising; mobilization of stakeholders; Girinka web-based system.
Immunization support	Training of trainers for AEFI detection, treatment, and reporting; active surveillance by central level staff, coordination on sentinel sites, quarterly field visits/ follow-up on immunization events; supportive supervision to health centers; sensitization workshops training private clinicians on VPD surveillance, integrated supportive supervision to health facilities and hospitals on MCH/ EPI/ VPD; workshop to develop strategy for adverse immunization events; coordination with community health workers; sample transportation fees; standard routine data collection tools and child immunization cards; maintenance and fuel for 4WD for transportation of immunization commodities; electricity and water for vaccines; data harmonization meetings; review of EPI/ VPD and related services; support district EPI advancement strategy; staff salaries; staff training in epidemic and infectious disease surveillance; data collection tools and guidelines.
Malaria intervention support services	Conduct annual field surveys on insecticide resistance monitoring; supervise LLIN mass distribution campaign; conduct malaria data assessment; quarterly meetings to review case investigations and meet with malaria partners; antimalaria drug efficacy survey.
M&E	M&E; Monitor milk/ dairy marketing; M&E for small livestock activities; M&E for school feeding program; evaluation of CBP/ CCM programs; M&E tools and field visits; consultant fees; survey on maternal deaths; sentinel sites impact survey; evaluation of national immunization program; baseline survey of NTDs in selected schools; post MDA coverage survey; M&E on beneficiaries; situational analysis on food and waterborne diseases; monitor CHW activities; KAP survey on NTDs; monitor JAPEM implementation; monitor hygiene and sanitation activities; M&E on NECDP interventions.
VUP	Minimal package; minimum package for asset transfers, for caseworkers, for graduation

Intervention Area	Types of Activities Included
Operational expenditures	Operational costs for the reduction of malnutrition in > 5 children; health staff salaries within the district.
Sanitation (studies)	Development of National Water Supply and Sanitation Master Plan.
Supervision	Supportive supervision in hospitals/ health facilities; supportive supervision on nutrition/ antenatal services; orientation meeting between nutritionists/ CHW supervisors; MOH integrated supportive supervision on MCH/ EPI/ VPD; support CSOs.
Training	Training master trainers, health workers and CHWs on anthropometric measures/ nutrition surveillance/ micro-nutrient deficiencies/ DPEM/ growth monitoring/ MNCH follow-up/ CBEHPP; CHW refresher training on MIYCN; healthcare provider training on malnutrition management/ MIYCN/ Growth Monitoring; EmONC training; childhood TB for hospital nutritionists; CEmONC mentorship; neonatal protocol mentorship; post-natal care mentorship, IMCI mentorship; CHW training on community health package; nutrition assessment counseling.
WASH (secondary schools)	Strengthen school hygiene and environment in secondary schools; purchase handwashing equipment for secondary schools; improve hygiene and environment activities in secondary schools; mobilize environmental and hygiene clubs in secondary schools.
Women's empowerment (strategy & advocacy)	Gender strategy implementation; link women dominated groups & cooperatives to private sector; TVET short-term training; institutional strengthening and project support to the National Gender Machinery Strategy; coordination/ oversight/ communication on gender equality and women empowerment; Strengthen gender mainstreaming strategies; advocacy and dialogue on gender equality/ family promotion/ GBV issues; mentorship strategy for women in leadership and entrepreneurship.

# Annex 2: Rwanda Nutrition Policy Environment

The Nutrition Policy (2019 draft) and the Early Childhood Development Policy (2011) provide the overarching policy framework for nutrition work in Rwanda. These feed into a medium-term strategy that then serves as a basis for an annual implementation plan and the development of the budget (see figure 1).

**ANNEX FIGURE 2.1: NUTRITION POLICY ENVIRONMENT**

<b>POLICY</b>	<ul style="list-style-type: none"> <li>• <b>Nutrition Policy 2019</b> (Objectives; Priority Areas)</li> <li>• <b>Early Childhood Development Policy 2011</b> (Specific Objectives; Short-Term/ Medium-Term/ Long-Term Objectives)</li> </ul>
<b>STRATEGIC PLAN</b>	<ul style="list-style-type: none"> <li>• <b>NECDP National Strategic Plan 2018-2024</b> (Strategic Direction; Outcomes; Outputs; Priority Interventions)</li> </ul>
<b>ANNUAL PLAN</b>	<ul style="list-style-type: none"> <li>• <b>ECD Single Plan of Action 2018-2019</b> (Objective; Strategy; High-Level Intervention; Activities)</li> </ul>
<b>ANNUAL BUDGET</b>	<ul style="list-style-type: none"> <li>• <b>Annual Budget 2018-2019</b> (Programs; Sub-programs; Outputs; Activities; Line item inputs)</li> </ul>

**The Nutrition Policy (2019)** aims to “provide a comprehensive framework for effective implementation and promotion of nutrition strategies and interventions that guarantee the nutritional well-being of the entire population of Rwanda, with special attention to pregnant and lactating women, adolescent girls and children under two years of age for the sustainable development of Rwanda.” It is closely aligned with Rwanda’s National Plan for Transformation, the national development framework. The Nutrition Policy is governed by the following two objectives:

1. Achieve adequate nutrition for optimum health for all Rwandans by eliminating all forms of undernutrition including stunting in children and micronutrient deficiencies including anemia in women, adolescent girls and children.
2. Halt and reverse trends in overweight and dietary practices related to non-communicable diseases among Rwandan population categories, particularly women, adolescents and children.

Additionally, there are five priority areas under the Nutrition Policy:

1. Reducing child stunting with a focus on children below two years.
2. Reducing anemia and other micronutrient related deficiencies with a focus on children, adolescent and women.
3. Improving coverage and quality of management of acute malnutrition/wasting.
4. Reducing overweight and obesity.
5. Pursuing a vision of a healthy, equitable and safe food systems to synergize with interventions in other areas: Health, ECD, WASH and social protection.

**The Early Childhood Development Policy (2011)** is broader than the national nutrition policy as it encompasses the entire early childhood development process and as such provides the policy basis for NECDP. The Early Childhood Development Policy (2011) aims to provide a framework for a holistic and integrated approach to child development, including inter-sectoral coordination in education, health, nutrition, sanitation, and child protection sectors. The goal is to “ensure all Rwandan children achieve their potential, are healthy, well-nourished and safe, and their mothers, fathers and communities become nurturing caregivers through receiving integrated early childhood development services.” The ECD Policy forms the foundation of basic education programs of MINEDUC; maternal and child health, nutrition and sanitation services in MINISANTE and MININFRA; and social protection services in MIGEPROF, MIFOTRA and other agencies and groups. The Early Childhood Development Policy is defined by specific and time-bound objectives (short-term/ medium-term/ long-term).

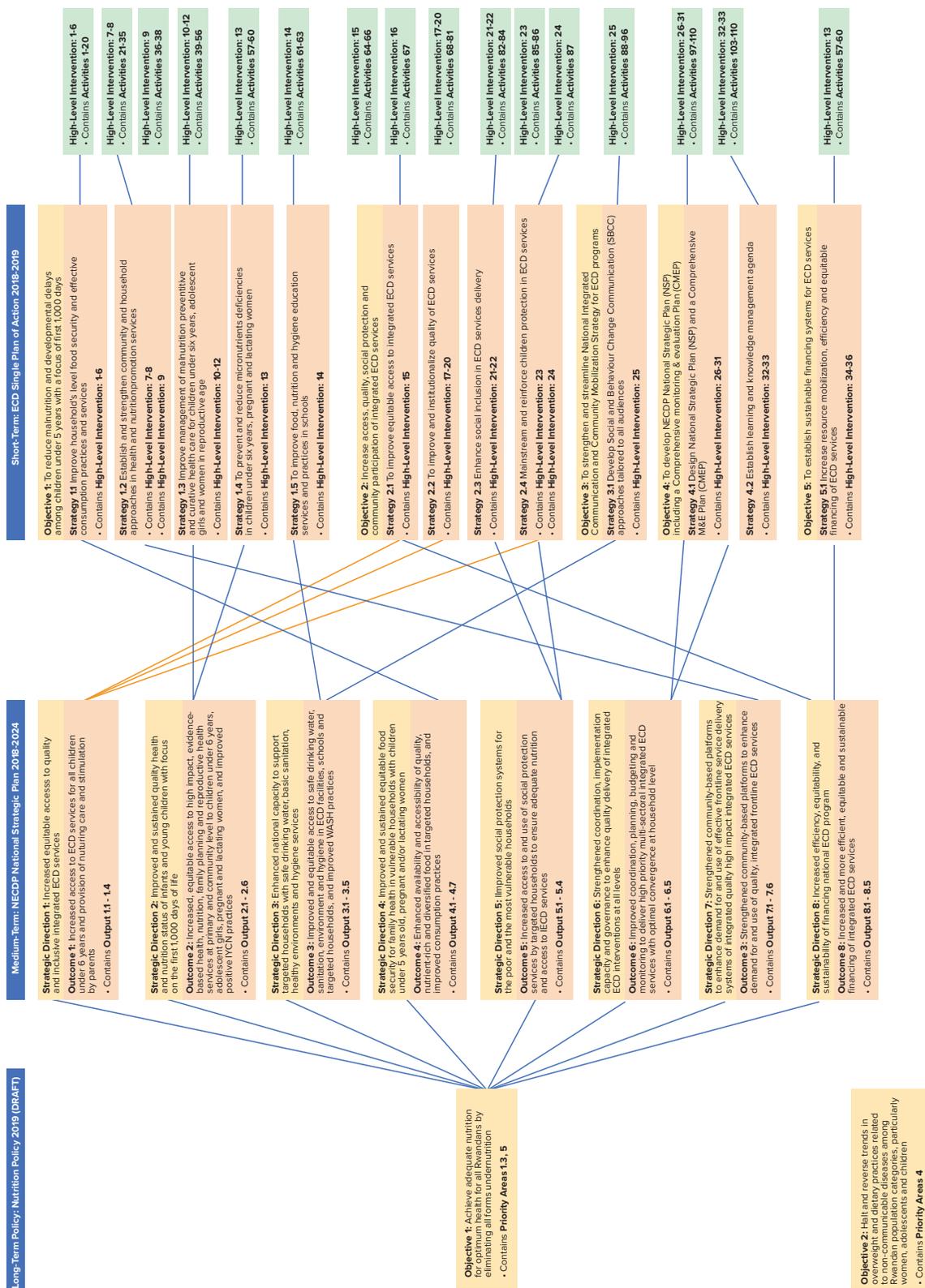
**The NECDP National Strategic Plan (2018-2024)** provides the medium-term strategic plan to implement the policy. It coordinates all interventions that support early childhood development for children from conception to six (6) years of age, in alignment with the Early Childhood Development Policy. It is characterized by eight strategic directions aimed at increasing the coverage and quality of high-impact, evidence-based integrated ECD interventions. Each strategic direction has one overarching outcome, 4-7 outputs linked to each outcome, and a list of 4-14 priority interventions based on international evidence, and national datasets. In terms of monitoring progress, there are 1-8 indicators mapped to each overarching outcome, and 1-7 indicators matched to each output. The NECDP has not been costed.

The national strategic plan is implemented through the **annual ECD Single Plan of Action** (ECD SPA). Here activities and tentative financing sources for these activities are identified. This serves as a guiding document to be adopted by the annual budget, which provides the legal basis for the executive to implement. The 2018/19 ECD SPA is the first action plan linked to the NECDP National Strategic Plan and provides guidance for the implementation of ECD programs in the current fiscal year. It aims to enhance coordination among all sectors and partners in realizing National ECD Goals and is the key document for monitoring implementation progress. The ECD SPA has five overarching objectives. Each objective under the SPA has 1-5 strategies, under which 1-6 high-level interventions are matched. Each high-level intervention is associated with 1-12 activities, and a similar number of key performance indicators.

These policy documents are not well aligned, which can complicate strategic planning and prioritization for nutrition. For example, it is unclear what role the ECD Policy and Nutrition Policy respectively play in the determination of priority nutrition interventions. Secondly, there are inconsistencies between the ECD Policy, the NECDP National Strategic Plan and the ECD Single Plan of Action: The ECD policy has short term, medium term, and long-term objective, which do not clearly map into the M&E framework of the NECDP Strategic plan. Instead, the NECDP Strategic plan uses strategic directions, outcomes, outputs, and priority interventions. It is unclear how the NECDP Strategic Plan maps to the vision set forth in the ECD Strategic Plan. Tenuous is also the relationship between the NECDP Strategic Plan and metrics used in the Annual Single Plan of Action, which are objectives, strategy, high-level interventions, and activities. It is furthermore unclear how exactly these interventions are mapped to programs, sub-programs, outputs, and activities in the annual budget. Further complicating the policy environment is that indicators used across these documents to monitor progress are not aligned. A nutrition policy map is provided in Annex 1, which attempts to bring clarity across the various documents. The current fragmentation does not allow for strategic planning and prioritization and it is unclear how the annual budget formulation process would take into account the guidance provided in the strategy documents. This hinders oversight and undermines mutual accountability. Further, the medium-term strategic plan has not been costed. As such it is of limited use to inform the development of annual plans and subsequently the budget. It also makes it difficult to determine what priority activities the various partners should finance and what government playbook they should align to. As such there is an urgent need to simplify the current policy environment, bring clarity into how the policy informs the prioritization

and implementation process and ensure progress against the implementation of the policy and medium-term strategic plan is adequately monitored.

**ANNEX FIGURE 2.2: NUTRITION POLICY ENVIRONMENT**



The NECDP’s Strategic Plan provides strategic direction, which appears to be somewhat aligned with objectives in the ECD Single Plan of Action. These are mapped in Annex Table 1. While some SAP objectives can be mapped to multiple strategic directions in the NECDP’s Strategic Plan, others cannot be at all.

**ANNEX TABLE 2.1: ALIGNMENT OF THE STRATEGIC DIRECTIONS OF THE NECDP’S STRATEGIC PLAN WITH SINGLE PLAN OF ACTION OBJECTIVES**

NECDP National Strategic Plan 2018-2024	ECD Single Plan of Action 2018-2019
<b>Strategic Direction 2:</b> Improved and sustained quality health and nutrition status of infants and young children with a focus on the first 1,000 days of life	<b>Objective 1:</b> To reduce malnutrition and developmental delays among children under 5 years with a focus of first 1,000 days
<b>Strategic Direction 1:</b> Increased equitable access to quality and inclusive integrated ECD services	<b>Objective 2:</b> Increase access, quality, social protection and community participation of integrated ECD services
<b>Strategic Direction 5:</b> Improved social protection systems for the poor and the most vulnerable households	
<b>Strategic Direction 7:</b> Strengthened community-based platforms to enhance demand for and use of effective frontline service delivery systems of integrated quality high impact integrated ECD services	
Strategic Direction 3: Enhanced national capacity to support targeted households with safe drinking water, basic sanitation, healthy environments and hygiene services	
Strategic Direction 4: Improved and sustained equitable food security for family health in vulnerable households with children under 5 years old, pregnant and/or lactating women	
<b>Strategic Direction 6:</b> Strengthened coordination, implementation capacity and governance to enhance quality delivery of integrated ECD interventions at all levels	<b>Objective 4:</b> To develop NECDP National Strategic Plan (NSP) including a Comprehensive monitoring & evaluation Plan (CMEP)
<b>Strategic Direction 8:</b> Increased efficiency, equitability, and sustainability of financing national ECD program	<b>Objective 5:</b> To establish sustainable financing systems for ECD services
	<b>Objective 3:</b> To strengthen and streamline National Integrated Communication and Community Mobilization Strategy for ECD programs

At the next hierarchy for the NSP are outputs, which appear to correspond to high-level interventions in the ECD SPA. Some are quite well aligned. For example, NSP’s Strategic Direction 4 Outcome 4 is well aligned to ECD SPA’s Objective 1 Strategy 1.1 (“Enhanced availability and accessibility of quality, nutrient-rich and diversified food in targeted households, and improved consumption practices” and “Improve household’s level food security and effective consumption practices and services” respectively), but the NSP’s Strategic 4 Directions and the ECD SPA’s Objective 1 do not (“Improved and sustained equitable food security for family health in vulnerable households with children under 5, pregnant and/or lactating women” and “To reduce malnutrition and developmental delays among children under 5 with a focus of first 1,000 days” respectively). Similarly, while ECD SPA’s high-level interventions are aligned to the outputs in the NSP (shown in green in the table below), some also do not fully align (shown in yellow in table below). The different categorizations and hierarchy of terms between the National Strategic Plan and the ECD Single Plan of Action, which each have their own sets of proposed activities (priority interventions vs. activities) and their respective indicators for tracking makes complicates the coordination and reporting process.

**ANNEX TABLE 2.2: ALIGNMENT OF THE OUTCOMES/OUTPUTS FROM THE NECD'S STRATEGIC PLAN WITH THE SINGLE PLAN OF ACTION'S HIGH-LEVEL INTERVENTIONS**

NECDP's National Strategic Plan 2018-2024: Outcomes/ Outputs	ECD Single Plan of Action 2018-2019: High-Level Interventions	
<b>Outcome 1: Increased access to ECD services for all children under 6 years and provision of nurturing care and stimulation by parents</b>	15	Enhance availability and utilization of integrated ECD services
Output 1.1: Increased number of ECD programs (facility and home-based), equitably distributed geographically	19	Harmonization of standards of ECD services in school settings
Output 1.2: Caregivers are skilled, have the play materials and resources, and guidance/standards to provide a full package of quality, integrated ECD services in accordance with ECD standards	18	Development of National Parenting Strategy
	17	Development and approval of an integrated ECD services package
Output 1.3: ECD facilities are equipped with the resources and have the skills for early screening and to care for children with special needs or disabilities	20	Improve early detection of disability and referral pathways
Output 1.4: Capacity to deliver nurturing care, stimulation, and protection from abuse in ECD facilities and at home is strengthened	23	Effective integration of Child protection systems in ECD settings
<b>Outcome 2: Increased, equitable access to high impact, evidence-based health, nutrition, family planning and reproductive health services at primary and community level to children under 6 years, adolescent girls, pregnant and lactating women, and improved positive IYCN practices</b>	10	Enhance appropriate management of malnutrition
Output 2.1: Healthcare professionals have the skills and competencies to provide an integrated package of inclusive, holistic health and nutrition services	12	Expand coverage of enhanced package of quality high impact nutrition and health interventions in health facilities
Output 2.2: Adequate mentoring and supportive supervision are in place to ensure service quality		
Output 2.3: Protocols and guidelines developed and rolled-out to set standards for service readiness and quality	11	Improve prevention and management of anemia in adolescent girls
Output 2.4: Enhanced capacity to provide micronutrient supplementation and full immunization package	13	Ensure availability and access of micronutrients in ECD services and primary health care provision facilities
Output 2.5: Improved tools and integrated approaches for growth monitoring and promotion, including rolling out of the child length mat		
Output 2.6: Improved quality and coverage of IYCN counselling and support, and integration into RMNCAH services		
<b>Outcome 3: Improved and equitable access to safe drinking water, sanitation, environment and hygiene in ECD facilities, schools and targeted households, and improved WASH practices</b>	9	Enhance access to Water, Sanitation and Hygiene (WASH) interventions to households in Ubudehe 1&2
Output 3.1 Increased supply of safe, reliable and sustainable drinking water to ECD facilities, schools and targeted households through the use of water treatment and safe water storage		
Output 3.2 Scalable models for increasing basic sanitation and hygiene services in ECD facilities, schools, communities and targeted households are developed and rolled-out		
Output 3.3 Targeted HH, ECD facilities and schools have the knowledge, skills and resources to adopt appropriate sanitation and hygiene practices	14	Enhance appropriate feeding and Hygiene practices Institutionalize school feeding guidelines particularly for preschool education
Output 3.4 District water safety plans that prioritize safe drinking water at ECD facilities, schools and targeted HH level are developed and implemented		
Output 3.5 Increased integration and cross sectoral linkages of WASH in social protection, nutrition and ECD programming, including integration of 'Baby WASH' messages	25	Design and operationalize national innovative communication strategy on the demand and utilization of integrated ECD services

<b>Outcome 4: Enhanced availability and accessibility of quality, nutrient-rich and diversified food in targeted households, and improved consumption practices</b>	5	Strengthen effective food consumption practices
Output 4.1 Increased local production of nutrient dense food crops among targeted HH for own consumption through use of subsidized agricultural inputs (GOR subsidies, diverse fruit trees, biofortified crops, kitchen gardens)	1	Increase production of high micronutrient dense food crops
Output 4.2 Increased production of animal sourced proteins among targeted HH for own consumption	2	Increase animal food production and services
Output 4.3 Necessary strategies, standards and guidelines in place, implemented and monitored (including diversification of protein sources strategy, food fortification strategy and standards, and Food Best Dietary Guidelines)		
Output 4.4 Increased access to fortified food in targeted households, including complementary food for children 6-24 months	3	Increase fortification of widely consumed food
Output 4.5 Agriculture extension workers have improved knowledge and skills about nutrition, including on gender dimensions of nutrition, and food consumption practices	4	Enhance productivity and performance of Agricultural promoters and facilitators
Output 4.6 Improved capacity at all levels for food security preparedness and response in the case of food shortages or emergencies	6	Strengthen emergency preparedness and responses in areas of nutrition and food security in vulnerable families and individuals
Output 4.7 Improved micronutrient data and research on food security systems and nutrition		
<b>Outcome 5: Increased access to and use of social protection services by targeted households to ensure adequate nutrition and access to IECD services</b>	21	Expand home based childcare support through extended Public Works (ePW) to households with pregnant and lactating women and/or children under two years
Output 5.1 Improved targeting, coverage and effectiveness of social security to reach vulnerable families with low labor capacity and to address financial barriers to accessing IECD services		
Output 5.2 Improved coverage, adequacy and appropriateness of social protection for reducing malnutrition, including nutrition-sensitive direct support, alternative income opportunities, food assistance and awareness raising on health, hygiene and nutrition		
Output 5.3 Improved capacity to deliver more comprehensive, responsive and effective social care services, especially for families with children under 6 years, and pregnant and lactating women	22	Enhance economic inclusion to improve livelihood of households with pregnant women and/or children under two years
Output 5.4 Capacity for integrated, interoperable CRVS system strengthened and awareness of CRVS increased	24	Enhance full coverage of vital statistics of children, including birth registration
<b>Outcome 6: Improved coordination, planning, budgeting and monitoring to deliver high priority multi-sectoral integrated ECD services with optimal convergence at household level</b>		
Output 6.1 Strengthened platforms at all levels to enable multi-sectoral coordination of integrated ECD services	26	Design National Strategic Plan (NSP)
Output 6.2 Strengthened capacity for planning, budgeting, M&E and resource tracking to scale up integrated ECD interventions to targeted households at all levels	27	Design Comprehensive monitoring & evaluation Plan (CMEP)
	28	Design Performance Monitoring Plan (PMP)
	29	Review and improve performance management dashboard with access to various management information systems (MIS) that contain ECD-related data
Output 6.3 Strengthened mechanisms and tools for governance and accountability at all levels	30	Design multisector and stakeholders' accountability framework

Output 6.4 Strengthened use of data and analysis to inform targeting, geographical prioritization and budget allocation	31	Establish a live National Direct Beneficiaries database
Output 6.5 Strengthened learning agenda for IECD through harmonized approaches to evaluations, surveys and research, and improved management information systems	32	Develop research plan on ECD services
	33	Conducting rigorous evaluations to draw timely lessons on what works, how much it costs, and how it can be scaled up
<b>Outcome 7: Strengthened community-based platforms to enhance demand for and use of quality, integrated frontline ECD services</b>		
Output 7.1 Increased capacities and professionalization of frontline workers (CHW, friends of family, agriculture promoters and ECD caregivers) to effectively deliver and coordinate high impact quality health, nutrition and ECD services	7	Enhance productivity and performance of Community Health Workers (CHW) in health care, nutrition services and integrated childhood
Output 7.2 Increase investments in and incentives for community-based platforms to improve quality and enhance convergence, including through community performance-based financing		
Output 7.3 A harmonized, community-based package of prioritized nutrition interventions to prevent and manage malnutrition is scaled up, including direct nutritional support for vulnerable groups		
Output 7.4 Effective tools, systems and incentives in place to strengthen early identification and management of malnutrition and delayed development at community level	8	Improve community and households' level screening and early identification for children at risk of malnutrition
Output 7.5 Strengthened community referral and follow-up mechanisms of children to primary health, nutrition and social protection services		
Output 7.6 Improved community health information systems, data quality and interoperability, including through the use of new technologies		
<b>Outcome 8: Increased and more efficient, equitable and sustainable financing of integrated ECD services</b>		
Output 8.1 Integrated ECD financing strategy for resource mobilization developed and operationalized	35	Costing and Resources mapping of ECD investments
	34	Develop ECD sustainable financing strategy including domestic resources mobilization, Innovative financing, community and private sector engagement
Output 8.2 Strong partnerships for resource mobilization developed, including with the private sector		
Output 8.3 Improved capacity of the NECDP sector, including skills and tools for integrated planning, budgeting, allocation and resource tracking at national and subnational levels		
Output 8.4 Increased financing for IECD leveraged through evidence-based advocacy	16	Increase ownership and prioritization of ECD services by decentralized authorities
Output 8.5 Integrated ECD resource tracking system developed and operationalized	36	Establish resources tracking system of ECD interventions, including planning, budgeting and expenditures reporting

# Annex 3: Detailed Nutrition Expenditure Data

This annex provides detailed nutrition expenditure data at the lowest level of disaggregation for both the government and development partners. Data tables are presented in absolute values (RWF) and percentage terms.

**ANNEX TABLE 3.1: GOVERNMENT NUTRITION EXPENDITURE BY CATEGORY (RWF MILLION)**

	2015/16	2016/17	2017/18	Total
<b>Specific</b>	<b>1,791M</b>	<b>10,058M</b>	<b>8,670M</b>	<b>20,518M</b>
Malaria interventions	733M	7,574M	3,860M	12,167M
FBF		1,838M	4,139M	5,977M
Deworming	319M	453M	510M	1,282M
Nutrition Supplement	713M			713M
Behavior change (specific)	10M	192M	161M	364M
Nutritional Assessment	16M			16M
<b>Sensitive</b>	<b>13,813M</b>	<b>27,387M</b>	<b>45,200M</b>	<b>86,401M</b>
Drinking Water	623M	14,886M	22,159M	37,668M
School feeding	3,369M	3,901M	5,130M	12,401M
Girinka	2,304M	3,063M	6,011M	11,378M
Milk	4,121M	2,100M	4,626M	10,848M
Immunization services	1,218M	1,190M	2,053M	4,461M
Supplementary feeding for HIV			2,437M	2,437M
ECD	416M	323M	1,243M	1,982M
Food security	1,388M	45M	115M	1,548M
Girl's education	299M	509M	531M	1,339M
Family Planning	0M	416M	372M	789M
Reproductive Health	17M	200M	302M	518M
CHW incentives (sensitive)	21M	365M		386M
WASH (secondary school)		134M	211M	345M
Kitchen gardens	15M	121M	7M	144M
Sanitation	12M	60M	2M	74M
Behavior change (sensitive)		73M		73M
Immunization support	5M			5M
Women empowerment	5M			5M
<b>Enabling environment</b>	<b>2,570M</b>	<b>3,139M</b>	<b>2,621M</b>	<b>8,329M</b>
CHW incentives	1,173M	891M	1,024M	3,088M
Immunization support	116M	448M	461M	1,025M
Malaria intervention support services		550M	307M	857M
Operational Expenditures	792M	1M		792M
M&E	14M	105M	350M	469M
Training	74M	14M	317M	406M
CIFF	9M	394M		403M
Girinka (policy)	1M	320M		321M
Coordination	16M	203M	30M	248M
Women empowerment (strategy & advocacy)	200M			200M
Supervision	74M	45M	82M	200M
Food security (research)	101M	40M		141M
VUP		130M		130M
Sanitation (studies)			50M	50M
<b>Total</b>	<b>18,173M</b>	<b>40,584M</b>	<b>56,491M</b>	<b>115,248M</b>

Source: Authors, based on MinEcoFin (2019).

**ANNEX TABLE 3.2: GOVERNMENT NUTRITION EXPENDITURE BY CATEGORY**  
(% OF SUBTOTAL, % OF TOTAL)

	2015/16	2016/17	2017/18	Total
<b>Specific</b>	<b>9.9%</b>	<b>24.8%</b>	<b>15.3%</b>	<b>17.8%</b>
Malaria interventions	40.9%	75.3%	44.5%	59.3%
FBF	0.0%	18.3%	47.7%	29.1%
Deworming	17.8%	4.5%	5.9%	6.2%
Nutrition Supplement	39.8%	0.0%	0.0%	3.5%
Behavior change (specific)	0.6%	1.9%	1.9%	1.8%
Nutritional Assessment	0.9%	0.0%	0.0%	0.1%
<b>Sensitive</b>	<b>76.0%</b>	<b>67.5%</b>	<b>80.0%</b>	<b>75.0%</b>
Drinking Water	4.5%	54.4%	49.0%	43.6%
School feeding	24.4%	14.2%	11.4%	14.4%
Girinka	16.7%	11.2%	13.3%	13.2%
Milk	29.8%	7.7%	10.2%	12.6%
Immunization services	8.8%	4.3%	4.5%	5.2%
Supplementary feeding for HIV	0.0%	0.0%	5.4%	2.8%
ECD	3.0%	1.2%	2.7%	2.3%
Food security	10.0%	0.2%	0.3%	1.8%
Girl's education	2.2%	1.9%	1.2%	1.5%
Family Planning	0.0%	1.5%	0.8%	0.9%
Reproductive Health	0.1%	0.7%	0.7%	0.6%
CHW incentives (sensitive)	0.2%	1.3%	0.0%	0.4%
WASH (secondary school)	0.0%	0.5%	0.5%	0.4%
Kitchen gardens	0.1%	0.4%	0.0%	0.2%
Sanitation	0.1%	0.2%	0.0%	0.1%
Behavior change (sensitive)	0.0%	0.3%	0.0%	0.1%
Immunization support	0.0%	0.0%	0.0%	0.0%
Women empowerment	0.0%	0.0%	0.0%	0.0%
<b>Enabling environment</b>	<b>14.1%</b>	<b>7.7%</b>	<b>4.6%</b>	<b>7.2%</b>
CHW incentives	45.6%	28.4%	39.1%	37.1%
Immunization support	4.5%	14.3%	17.6%	12.3%
Malaria intervention support services	0.0%	17.5%	11.7%	10.3%
Operational Expenditures	30.8%	0.0%	0.0%	9.5%
M&E	0.5%	3.3%	13.3%	5.6%
Training	2.9%	0.4%	12.1%	4.9%
CIFF	0.4%	12.5%	0.0%	4.8%
Girinka (policy)	0.0%	10.2%	0.0%	3.9%
Coordination	0.6%	6.5%	1.1%	3.0%
Women's empowerment (strategy & advocacy)	7.8%	0.0%	0.0%	2.4%
Supervision	2.9%	1.4%	3.1%	2.4%
Food security (research)	3.9%	1.3%	0.0%	1.7%
VUP	0.0%	4.1%	0.0%	1.6%
Sanitation (studies)	0.0%	0.0%	1.9%	0.6%
<b>Grand Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: Authors, based on MinEcoFin (2019).

**ANNEX TABLE 3.3: GOVERNMENT NUTRITION SPENDING BY VOTE, PROGRAM, AND SUB-PROGRAM, 2018 (RWF)**

	Program	Sub-program	Specific	Sensitive	Enabl. Env.	Total	
RBC	Maternal and Child Health	Community Health		40M	19M	59M	
		Family Planning and Reproductive Health		180M		180M	
		Maternal and Child Health Improvement			56M	56M	
		Nutrition	4,139M		214M	4,352M	
	Disease Prevention and Control	Epidemic Infections, Diseases			3M	3M	
		HIV/Aids, STIs, and Other Blood-borne Diseases			178M	15M	193M
		Malaria and Other Parasitic Diseases	3,326M		150M	3,475M	
		Vaccine Preventable Diseases	1M	0M	5M	6M	
	Health Quality Improvement	Health Communication	122M	19M		141M	
		Medical Procurement and Distribution	1,044M	458M		1,502M	
Districts	Education	Pre-primary and Primary Education		306M		306M	
		Secondary Education		2,755M		2,755M	
	Agriculture	Sustainable Crop Production	0M	37M		38M	
		Sustainable Livestock Production		2,995M		2,995M	
	Water and Sanitation	Sanitation and Waste Management		31M		31M	
		Water Infrastructure		1,201M		1,201M	
	Health	Disease Control			187M	187M	
		Health Infrastructure, Equipment and Goods			10M	10M	
		Health Staff Management			55M	55M	
	Social Protection	Vulnerable Groups Support		6M		6M	
WASAC	Water and Sanitation	Drinking Water Access		4,308M		4,308M	
		Sanitation Access			25M	25M	
LODA	Social Protection	Social Protection		2,630M		2,630M	
RAB	Agriculture and Animal Resource Intensification	Livestock Development		341M		341M	
		Nutrition and Household Vulnerability		125M		125M	
	Administrative and Support Services	Administrative and Support Services	5M			5M	
MinAgri	Institutional Development and Agricultural	Agricultural Statistical Systems MIS M&E and Knowledge Management	0M	0M		0M	
		Cross Cutting Issues in Agriculture		115M		115M	
	Cross-Cutting Issues	Decentralization		0M		0M	
	Agriculture and Animal Resource Intensification	Livestock Development		0M		0M	
Soil Conservation and Land Husbandry			0M		0M		

Source: Authors, based on MinEcoFin (2019).

	Program	Sub-program	Specific	Sensitive	Enabl. Env.	Total
MiniYouth	Youth Social Empowerment, Ethics and Mobilization	Youth Social Empowerment and Inclusiveness		72M		72M
NECDP	Early Childhood Development coordination	Early Learning, Parent Education and Child Protection Coordination			3M	3M
		Nutrition and Hygiene coordination	29M			29M
MINALOC	Policy Development and Coordination	Social Protection			11M	11M
MiniSante	Maternal and Child Health	Hygiene and Environmental Health	3M	0M		3M
	Financial and Geographical Health Accessibility	Performance-based Financing			3M	3M
MinEduc	Education Sector Planning and Coordination	Cross-Cutting Programs in Education		1M		1M

**ANNEX TABLE 3.4: DEVELOPMENT PARTNER NUTRITION SPENDING (RWF M)**

Development Partner Nutrition Spending (RWF M)	2015/16	2016/17	2017/18
<b>1. Nutrition-Specific</b>	<b>3,575M</b>	<b>4,573M</b>	<b>2,986M</b>
1.03 Micronutrient supplementation or fortification	2,115M	2,796M	2,616M
UNICEF	1,658M	1,821M	1,456M
DFID	457M	975M	1,160M
1.04 Breastfeeding and complementary feeding	75M	55M	97M
Caritas Rwanda	75M	55M	97M
1.05 Dietary supplementation	819M	1,399M	38M
Partners in Health	32M	36M	36M
FXB Rwanda	0M	0M	1M
WFP	787M	1,362M	0M
1.07 Feeding behaviors and stimulation	298M	298M	194M
UNICEF	234M	198M	164M
FXB Rwanda	64M	24M	29M
Global Communities	0M	75M	1M
Caritas Rwanda	0M	0M	0M
1.08 Treatment of severe acute malnutrition	268M	25M	42M
FXB Rwanda	78M	5M	23M
Caritas Rwanda	190M	14M	14M
Partners in Health	0M	7M	6M
UNICEF	0M	0M	
1.09 Disease prevention and management	0M	0M	0M
UNICEF	0M	0M	0M

Development Partner Nutrition Spending (RWF M)	2015/16	2016/17	2017/18
<b>2. Nutrition-Sensitive</b>	<b>2,720M</b>	<b>6,462M</b>	<b>6,707M</b>
2.01 Agriculture and food security	1,436M	1,223M	1,031M
FAO	220M	0M	669M
UNICEF	939M	504M	214M
Caritas Rwanda	273M	706M	124M
FXB Rwanda	3M	13M	24M
DFID			
2.02 Social safety nets	0M	0M	84M
FAO	0M	0M	82M
FXB Rwanda	0M	0M	2M
2.03 Early child development	33M	26M	6M
FXB Rwanda	0M	0M	3M
Global Communities	0M	26M	2M
Caritas Rwanda	33M	0M	1M
DFID			
2.08 Water and sanitation	1,181M	4,068M	4,378M
USAID	1,177M	4,007M	4,255M
Global Communities	0M	39M	96M
FXB Rwanda	4M	22M	27M
UNICEF	0M	0M	0M
2.09 Health and family planning services	71M	1,145M	1,208M
Partners in Health	71M	1,145M	1,208M
UNICEF	0M	0M	0M
<b>3. Enabling Environment</b>	<b>1,873M</b>	<b>1,532M</b>	<b>1,266M</b>
3.01 Rigorous evaluations	880M	440M	395M
UNICEF	713M	440M	384M
FXB Rwanda	0M	0M	11M
WHO	168M	0M	0M
3.02 Advocacy strategies	178M	362M	32M
FXB Rwanda	28M	31M	32M
WHO	0M	330M	0M
SUN Alliance	150M	0M	0M
3.03 Horizontal and vertical coordination	434M	445M	374M
UNICEF	434M	445M	359M
FXB Rwanda	0M	0M	16M
DFID			
FAO	0M	0M	0M
3.04 Accountability incentives, regulation, and legislation	51M	58M	0M
UNICEF	0M	0M	
SUN Alliance	51M	58M	0M
3.05 Leadership programs	1M	1M	0M
FXB Rwanda	1M	1M	0M
3.06 Capacity investments	329M	228M	464M
WFP	0M	0M	151M
WHO	260M	0M	123M
FAO	0M	0M	73M
UNICEF	58M	55M	55M
Global Communities	10M	173M	51M
FXB Rwanda	0M	0M	11M
<b>Total</b>	<b>8,169M</b>	<b>12,567M</b>	<b>10,959M</b>

## Annex 4: Sensitivity Analysis - Results

This annex presents the results of the sensitivity analysis. Government nutrition-sensitive and enabling environment investments were carefully weighed against estimated contribution to nutrition outcomes. Nutrition specific spending is considered fully attributable. Details on methods and data for the sensitivity analysis is provided in Annex 5.

**Government spending on nutrition is growing, though remains at a low level.** Total government spending on nutrition (including nutrition-specific, nutrition-sensitive, and enabling environment interventions) is low, albeit increasing. Total nutrition spending has doubled in nominal terms since 2016 to about RWF 25,225 million, which amounts to US\$16.8 per child or US\$2.5 per child. Government spending on nutrition specific interventions amounts to less than US \$1 per child, which is well below the recommended US\$10 per child – considered the minimum amount necessary to provide an effective package of interventions.

**Total weighed nutrition spending is driven by nutrition-sensitive spending.** Nutrition-sensitive spending makes up the majority of nutrition-related spending and has increased at a steady pace. While there has been a large increase in nutrition-sensitive spending in 2018, spending to nutrition-specific interventions has decreased. Spending on enabling environment factors has been relatively insignificant. Nutrition-specific spending makes up a significantly larger share of total nutrition spending in the weighed scenario (34 percent of total nutrition spending compared to 16 percent in the unweighted scenario). An overview of total weighed nutrition spending by the government is provided in Annex Table 4.1 below.

**ANNEX TABLE 4.1: KEY NUTRITION RELATED INDICATORS, WEIGHED ESTIMATES, 2016-2018**

	2015/16	2016/17	2017/18
Total government spending (RWF)	1,647,600 M	1,829,100 M	2,027,500 M
Health* related spending (RWF)	86,866M	168,985M	183,339M
Total nutrition** spending (RWF)	11,507M	21,525M	25,225M
...Nutrition-specific spending (RWF)	1,791M	10,058M	8,670M
...Nutrition-sensitive spending (RWF)	9,052M	10,332M	15,798M
...Nutrition enabling environment spending (RWF)	664M	1,135M	757M
Total nutrition as % of GGE	0.7%	1.2%	1.2%
Nutrition-specific as % of GGE	0.1%	0.5%	0.4%
Nutrition-specific as % of GHE	2.1%	6.0%	4.7%
GHE as % of total government	5.3%	9.2%	9.0%
p/c total nutrition spending (USD)	1.3	2.2	2.5
p/U5 total nutrition spending (USD)	9.2	15.0	16.8
p/c nutrition specific spending (USD)	0.2	1.0	0.8
p/U5 nutrition specific spending (USD)	1.4	7.0	5.8

Notes: GDP = Gross domestic product; p/c = per capita; p/U5 = per under five; GGE = General government expenditure; GHE = Government health expenditure. All in nominal terms.

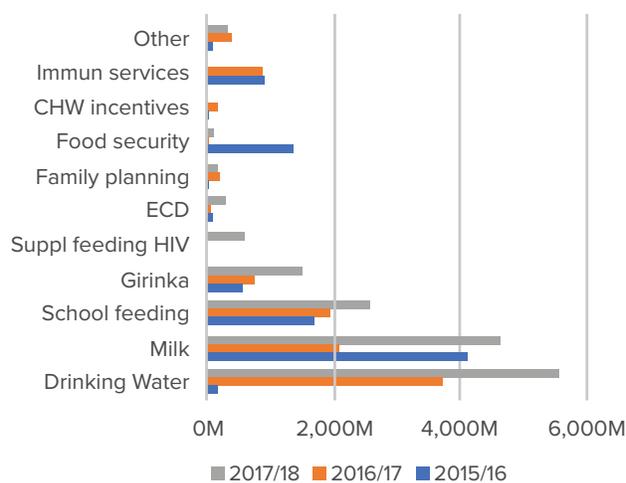
\*Health related spending relevant activities from MINISANTE, RBMC, all districts, Minaloc, and MinEduc.

\*\* Total nutrition spending includes nutrition specific and nutrition sensitive interventions as well as investments in an enabling environment. Details are discussed in the methods chapter.

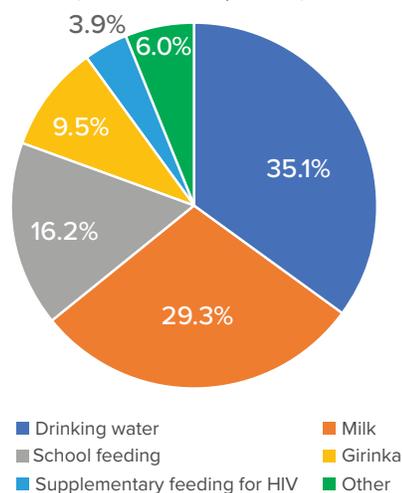
Source: Authors, based on MINECOFIN (2019).

**The government financed a diverse set of nutrition sensitive spending.** The most prominent of these are interventions supporting drinking water, the delivery of milk, school feeding initiatives, and Girinka. While support to drinking water, milk, school feeding, and Girinka have increased quite rapidly since 2016, support to other nutrition sensitive activities has remained stagnant or declined. Immunization services for example made up 10 percent of total nutrition sensitive spending in 2016 but received limited financing allocation in 2018. Spending on food security also decreased dramatically. While there has been an increase in supplementary feeding for HIV, it still only makes up a small share of total financing. Incentives for CHWs are another important element in nutrition support that receives little to no financing allocations from government.

**ANNEX FIGURE 4.1: TREND IN FINANCING NUTRITION SENSITIVE INTERVENTIONS, (WEIGHTED FY16-18)**



**ANNEX FIGURE 4.2: SHARE OF NUTRITION SENSITIVE INTERVENTIONS (WEIGHTED, FY18)**



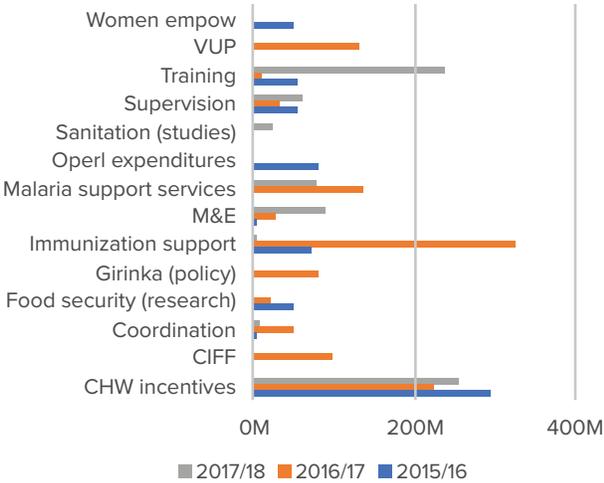
Source: Authors, based on MinEcoFin (2019).

**Nutrition-sensitive interventions are implemented across the government.** The NECDP is in a better position to oversee nutrition-specific activities than nutrition-sensitive activities. The vast majority of nutrition-specific activities are financed through the RBC, while nutrition-sensitive activities are implemented by all districts, MinAgri, MiniSante, WASAC, the NWC, MinEduc, MiniYouth, MIGEPROF, the RAB, and the RBC. Across all of these agencies, financing is channeled through 29 programs and 54 sub-programs. This makes oversight and coordination considerably more difficult. This compares with three programs and four subprograms for nutrition-specific interventions.

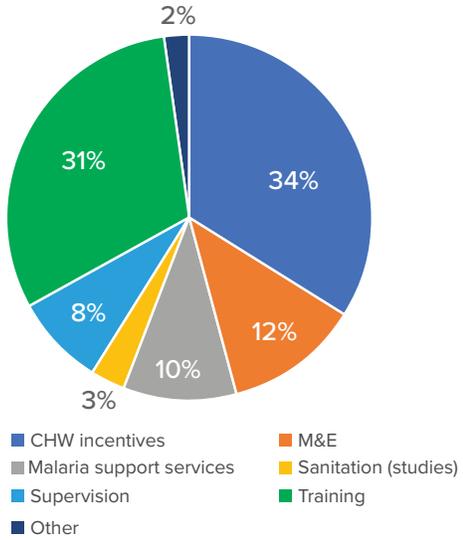
**Enabling environment investments make up a small and declining share of total weighted nutrition spending.** Enabling environment spending was reduced by one percentage point each year since 2016 to 3 percent of total nutrition spending in 2018. This has been on a wide range of activities, including community health worker incentives,<sup>47</sup> training activities, monitoring and evaluation, malaria intervention support services, supervision activities, policy work and research, as nutrition coordination activities.

<sup>47</sup> See methods section on difference between CHW activities coded as sensitive and enabling environment.

**ANNEX FIGURE 4.3: TREND IN FINANCING NUTRITION-SENSITIVE INTERVENTIONS, (WEIGHTED, FY16-18)**



**ANNEX FIGURE 4.4: SHARE OF NUTRITION-SENSITIVE INTERVENTIONS (WEIGHTED, FY18)**



# Annex 5: Sensitivity Analysis – Methods And Data

**A weighting process was used for sensitivity analysis to allocate financing amounts to nutrition.** All nutrition specific interventions received a full 100 percent weight. Partial attribution was provided to nutrition sensitive and enabling environment investments following a variant of the methodology recommended by the Scaling Up Nutrition (SUN) initiative. Interventions were classified into quartiles to 100 percent, 75 percent, 50 percent, or 25 percent. Activities that were only marginally relevant were attributed only 10 percent share. For budget lines that were not sufficiently disaggregated to delineate budget amounts contributing to nutrition outcomes, average weights from the *MQSUN Report: Analysis of Nutrition-Sensitive Budget Allocations: Experience from 30 Countries*<sup>48</sup> were used as approximations. The SUN Movement collected data on budget allocations on nutrition interventions for 30 SUN Countries that voluntarily submitted an Excel spreadsheet within budget line items identified, amount allocated in their budget within their national currency, as well as categorization of budget lines into nutrition-specific or nutrition-sensitive as part of a global effort to accelerate efforts to track financial resources for nutrition. As disaggregated data is often unavailable, countries applied a weight of either 25 percent across the board for nutrition-sensitive budget lines, or another weight between 0 and 100 percent based on their own judgement. A total of 14 out of 30 countries<sup>49</sup> provided weights within the dataset, and an analysis of weights used showed that the average weightings were very similar across sectors and all reporting a median of 25 percent (except for the “Other” category). Details on weighting are provided below.<sup>50</sup>

**ANNEX TABLE 5.1: APPLICATION OF WEIGHTING OF GOVERNMENT NUTRITION-SENSITIVE SPENDING AND ENABLING ENVIRONMENT INVESTMENTS, (%)**

Category	Interventions	Rwanda NPER Code	Weights applied by Rwanda Development Organization	Mean Weights Applied by SUN Methodology	Weights Applied for Sensitivity Analysis
Nutrition-Sensitive	Agriculture and Food Security	Girinka	100	26	25
		Kitchen gardens	NA	30	75
		Milk	100	33	100
		Food security	NA	33	100
	Social Safety Nets	VUP	50	30	100
	Early Child Development	ECD	NA	24	25
	Women’s Empowerment	Women empowerment	25	16	25
	Classroom Education	School feeding	NA	46	50
		Girl's education	NA	38	25

<sup>48</sup> Greener et al (2016).

<sup>49</sup> The MQSUN document notes weights per sector for 14 unspecified countries and extrapolates these to all 30. <http://scalingupnutrition.org/wp-content/uploads/2016/04/MQSUN-Report-Nutrition-sensitive-Allocations-160311.pdf>

<sup>50</sup> In the Nutrition Expenditure Reviews completed thus far, not all countries have reported their weighting details. Those that have reported do not have comparable categories.

Nutrition-Sensitive	Water and Sanitation	Drinking Water	NA	26	25
		WASH (secondary school)	NA	19	25
		Sanitation	NA	26	25
	Health and Family Planning Services	Family Planning	NA	52	50
		Reproductive Health	NA	52	50
		Immunization services	NA	66	75
		CHW incentives (sensitive)	NA	42	50
		Supplementary feeding for HIV	NA	27	25
		Behavior change (sensitive)	25	16	25
	Enabling Environment	Rigorous Evaluations	Food security (research)	50	33
Malaria intervention support services			NA	27	25
M&E			25	16	25
Advocacy Strategies		Women empowerment (strategy & advocacy)	25	16	25
Horizontal and Vertical Coordination		Coordination	25	16	25
		CIFF	25	16	25
Accountability Incentives, Regulation and Legislation		Girinka (policy)	25	16	25
		Sanitation (studies)	50	22	50
Capacity Investments		CHW incentives	NA	21	25
		Immunization support	NA	66	75
		Operational Expenditures	NA	16	10
		Supervision	NA	16	75
		Training	NA	16	75

**ANNEX TABLE 5.2: WEIGHED ESTIMATES OF EXPENDITURE BY NUTRITION INTERVENTIONS, (RWF MILLIONS)**

Category	Intervention	2015/16	2016/17	2017/18
<b>Specific</b>	Behavior change (specific)	10M	192M	161M
	Deworming	319M	453M	510M
	FBF		1,838M	4,139M
	Malaria interventions	733M	7,574M	3,860M
	Nutrition Supplement	713M		
	Nutritional Assessment	16M		
<b>Specific Total</b>		<b>1,791M</b>	<b>10,058M</b>	<b>8,670M</b>
<b>Sensitive</b>	Behavior change (sensitive)		12M	
	CHW incentives (sensitive)	9M	153M	
	Drinking Water	162M	3,870M	5,761M
	ECD	100M	78M	298M
	Family Planning	0M	216M	194M
	Food security	458M	15M	38M
	Girinka	599M	796M	1,563M
	Girl's education	114M	193M	202M
	Immunization services	804M	785M	0M
	Kitchen gardens	4M	36M	2M
	Milk	1,360M	693M	1,527M
	Reproductive Health	9M	104M	157M
	Sanitation	3M	16M	0M
	School feeding	1,550M	1,795M	2,360M
	Supplementary feeding for HIV			658M
	WASH (secondary school)		25M	40M
Women empowerment	1M			
<b>Sensitive Total</b>		<b>5,172M</b>	<b>8,788M</b>	<b>12,800M</b>
<b>Enabling environment</b>	CHW incentives	246M	187M	215M
	CIFF	1M	63M	
	Coordination	3M	32M	5M
	Food security (research)	33M	13M	
	Girinka (policy)	0M	51M	
	Immunization support	62M	287M	5M
	M&E	2M	17M	56M
	Malaria intervention support services		148M	83M
	Operational Expenditures	127M	0M	
	Sanitation (studies)			11M
	Supervision	12M	7M	13M
	Training	12M	2M	51M
	VUP		39M	
Women empowerment (strategy & advocacy)	32M			
<b>Enabling Environment Total</b>		<b>530M</b>	<b>847M</b>	<b>438M</b>
<b>Total</b>		<b>7,493M</b>	<b>19,693M</b>	<b>21,908M</b>

**ANNEX TABLE 5.3: WEIGHED EXPENDITURE BY GOVERNMENT AGENCY, (RWF MILLIONS)**

Category	Government Agency	2015/16	2016/17	2017/18
<b>Specific</b>	Districts		7M	0M
	MinAgri			0M
	MINALOC		6M	
	MiniSante		127M	3M
	National Early Childhood Development Program (NECDP)			29M
	Rwanda Agricultural Board (RAB)	1M		5M
	Rwanda Biomedical Center (RBC)	1,789M	9,918M	8,632M
<b>Specific Total</b>		<b>1,791M</b>	<b>10,058M</b>	<b>8,670M</b>
<b>Sensitive</b>	Districts	2,180M	3,928M	5,953M
	Local Development Agency (LODA)	834M	692M	868M
	MIGEPROF	5M		
	MinAgri	443M	4M	38M
	MINALOC		1M	
	MinEduc		2M	1M
	MiniSante	3M	1M	0M
	MiniYouth			74M
	National Women Council (NWC)	2M		
	Rwanda Agricultural Board (RAB)	885M	98M	452M
	Rwanda Biomedical Center (RBC)	819M	1,238M	934M
	Water and Sanitation Corporation (WASAC)		2,824M	4,480M
	<b>Sensitive Total</b>	<b>5,172M</b>	<b>8,788M</b>	<b>12,800M</b>
<b>Enabling environment</b>	Districts	363M	245M	213M
	Local Development Agency (LODA)		1M	
	MIGEPROF	30M		
	MinAgri	36M		
	MINALOC		1M	7M
	MinEduc	0M		
	MiniSante	17M	1M	2M
	National Early Childhood Development Program (NECDP)			2M
	Rwanda Agricultural Board (RAB)	0M	51M	
	Rwanda Biomedical Center (RBC)	83M	548M	203M
Water and Sanitation Corporation (WASAC)			11M	
<b>Enabling Environment Total</b>	<b>530M</b>	<b>847M</b>	<b>438M</b>	
<b>Total</b>		<b>7,493M</b>	<b>19,693M</b>	<b>21,908M</b>

