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Report No: PAD2536

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED CREDIT
IN THE AMOUNT OF SDR 17.6 MILLION
(US$25 MILLION EQUIVALENT)

AND

A PROPOSED GRANT FROM THE MULTI DONOR TRUST FUND FOR ACHIEVING NUTRITION IMPACT AT SCALE
IN THE AMOUNT OF US$20 MILLION

AND

A PROPOSED GRANT FROM THE GLOBAL FINANCING FACILITY
IN THE AMOUNT OF US$10 MILLION

TO THE REPUBLIC OF RWANDA

FOR THE

STUNTING PREVENTION AND REDUCTION PROJECT

February 6, 2018

Health, Nutrition and Population Global Practice
Africa Region

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CURRENCY EQUIVALENTS

(Exchange Rate Effective: December 31, 2017)

Currency Unit =	Rwandan Franc (RWF)
RWF 859 =	US$1.00
US$1.00 =	SDR 0.70218309

FISCAL YEAR

July 1 - June 31

ABBREVIATIONS AND ACRONYMS

AARR	Average Annual Rate of Reduction
AIDS	Acquired Immune Deficiency Syndrome
ASM	*Agent de Santé Maternelle* [Maternal Health Agent]
BCC	Behavior Change Communications
CBO	Community Based Organization
CFSVA	Comprehensive Food Security and Vulnerability Analysis
CHW	Community Health Worker
CIAT	International Center for Tropical Agriculture
CIP	International Potato Center
CPR	Contraceptive Prevalence Rate
DA	Designated Account
DHS	Demographic and Health Survey
DPEM	District Plans to Eliminate Malnutrition
DPs	Development Partners
ECD	Early Childhood Development
EKN	Embassy of the Kingdom of the Netherlands
GDP	Gross Development Progress
GFF	Global Financing Facility
GRS	Grievance Redress Service
HC	Health Centre
HIV	Human Immuno-Deficiency Virus
HMIS	Health Management Information System
ICB	International Competitive Bidding
IDA	International Development Association
IEC	Information, Education, and Communication
IFA	Iron/Folic Acid
IFC	International Finance Corporation
IFI	International Financial Institutions
IFPRI	International Food Policy Research Institute
IFMIS	Integrated Financial Management Information System
IPF	Investment Project Financing

IYCF	Infant and Young Children Feeding
JAPEM	Joint Action Plan to Eliminate Malnutrition
KPIs	Key Performance Indicators
M&E	Monitoring and Evaluation
MCCH	Maternal, Child and Community Health
MDGs	Millennium Development Goals
MDTF	Multi-Donor Trust Fund for Achieving Nutrition Impact at Scale
MIGEPROF	Ministry of Gender and Family Promotion
MICS	Multiple Indicator Cluster Survey
MINAGRI	Ministry of Agriculture and Animal Resources
MINALOC	Ministry of Local Government
MINECOFIN	Ministry of Finance and Economic Planning
MNP	Micronutrient Powders
MoH	Ministry of Health
MoU	Memorandum of Understanding
MWMP	Medical Waste Management Plan
NCB	National Competitive Bidding
NFNCS	National Food and Nutrition Coordination Secretariat
NGO	Non-Governmental Organization
NIRP	National Independent Review Panel
OAG	Office of the Auditor General
ORS	Oral Rehydration Solution
PBF	Performance Based Financing Program
PDO	Project Development Objective
PIM	Project Implementation Manual
PNC	Postnatal Checkup
PPSD	Project Procurement Strategy for Development
PRAMS	Procurement Risk Assessment and Management System
PSC	Project Steering Committee
QCBS	Quality and Cost-Based Selection
RAB	Rwanda Agriculture Board
RBC	Rwanda Biomedical Center
RPPA	Rwanda Public Procurement Authority
SBDs	Standard Bidding Documents
SDG	Sustainable Development Goal
SDR	Special Drawing Rights
SPIU	Single Project Implementation Unit
SSP	Strengthening Social Protection
STEP	Systematic Tracking of Exchanges in Procurement
SUN	Scaling Up Nutrition
UN	United Nations
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VAD	Vitamin A Deficiency
WASAC	Water and Sanitation Corporation Ltd
WB	World Bank

WFP	World Food Program
WHO	World Health Organization

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BASIC INFORMATION

Is this a regionally tagged project?	Country(ies)	Financing Instrument
No		Investment Project Financing

[ ] Situations of Urgent Need of Assistance or Capacity Constraints

[ ] Financial Intermediaries

[ ] Series of Projects

Approval Date	Closing Date	Environmental Assessment Category
28-Feb-2018	30-April-2023	B - Partial Assessment

Bank/IFC Collaboration
No

Proposed Development Objective(s)

To contribute to the reduction in the stunting rate among children under five years of age (with a focus on under two) in the targeted districts.

Components

Component Name	Cost (US$, millions)
Component 1: Prevention of Stunting at Community and Household Levels	35.0
Component 2: High-impact Health and Nutrition Services	14.5
Component 3: Monitoring and Evaluation, and Project Management	5.5

Organizations

Borrower:	MINISTRY OF FINANCE AND ECONOMIC PLANNING
Implementing Agency:	Rwanda Biomedical Center

PROJECT FINANCING DATA (US$55 Millions)

SUMMARY

Total Project Cost	55.00
Total Financing	
Financing Gap	0.00

DETAILS

International Development Association (IDA)	25.00
IDA Credit	25.00
Trust Funds	
Scaling up Nutrition	20.0
Global Financing Facility	10.0

Expected Disbursements (in US$, millions)

Fiscal Year	2018	2019	2020	2021	2022	2023
Annual	2.80	8.30	11.00	16.50	11.00	5.50
Cumulative	2.80	11.00	22.00	38.50	49.50	55.00

INSTITUTIONAL DATA

Practice Area (Lead)

Health, Nutrition & Population

Contributing Practice Areas

Agriculture
Social Protection & Labor
Water & Sanitation

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks.

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

Yes

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

Yes

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

Yes

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Substantial
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary	Moderate
7. Environment and Social	Moderate
8. Stakeholders	Moderate
9. Other	
10. Overall	Substantial

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✔] No

Does the project require any waivers of Bank policies?

[ ] Yes [✔] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	✔	
Natural Habitats OP/BP 4.04		✔
Forests OP/BP 4.36		✔
Pest Management OP 4.09		✔
Physical Cultural Resources OP/BP 4.11		✔
Indigenous Peoples OP/BP 4.10		✔
Involuntary Resettlement OP/BP 4.12		✔
Safety of Dams OP/BP 4.37		✔
Projects on International Waterways OP/BP 7.50		✔
Projects in Disputed Areas OP/BP 7.60		✔

Legal Covenants

Sections and Description

No later than three (3) months after the Effective Date, appointment within RBC-SPIU, of a team headed by a Project coordinator/focal point with experience in community nutrition matters and comprised of a monitoring and evaluation specialist, two accountants and an internal auditor. [Schedule 2, Section I.A.1 of the FA; also reflected in the GFF and MDTF Grant Agreements]

Sections and Description

Adoption by RBC, not later than three (3) months after the Effective Date, of the Project Implementation Manual, in a manner and substance satisfactory to the Association. [Schedule 2, Section I.C. of the FA; also reflected in the GFF and MDTF Grant Agreements]

Conditions

Sections and Description

Condition of effectiveness - The Co-financing Agreements have been executed and delivered and all conditions precedent to its effectiveness or to the right of the Recipient to make withdrawals under it (other than the effectiveness of this Agreement) have been fulfilled. [Article V. 5.01. (a) of the FA]

Sections and Description

Condition of effectiveness - The Subsidiary Agreement has been executed on behalf of the Recipient and the Project Implementing Entity and all conditions precedent to its effectiveness, save for the effectiveness of this Agreement, shall have been met. [Article V. 5.01. (b) of the FA]

Sections and Description

Condition of effectiveness - Receipt of legal opinions from the Recipient and the Project Implementing Entity satisfactory to the World Bank of counsel acceptable to the World Bank, showing the following matters. [Article V. 5.01 and 5.02. of the GFF GA and the MDTF GA]:

(a) on behalf of the Recipient, that the GFF and MDTF Agreements have been duly authorized or ratified by,

and executed and delivered on its behalf and is legally binding upon it in accordance with its terms;

(b) on behalf of the Project Implementing Entity, that the Project Agreement has been duly authorized by, and executed and delivered on its behalf and is legally binding upon it in accordance with its terms; and,

(c) on behalf of the Recipient and the Project Implementing Entity, the Subsidiary Agreement referred to in Section I.B. of Schedule 2 to this Agreement has been duly authorized by the Recipient and the Project Implementing Entity and is legally binding upon each such party in accordance with its terms.

Sections and Description

Condition of disbursement - Payments against activities under "Financing of Performance-Based Payments to CHWs" (Expenditure Category (3)) will not be made until the Recipient has prepared and adopted the Supplemental PBF Manual for Targeted Districts, in accordance with Section I.C. of Schedule 2 to the FA. [Section III. B. 1. (b) of the FA; similar provision in MDTF GA]

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Miriam Schneidman	Lead Public Health Specialist, Team Leader (ADM Responsible)		GHN01
Mulugeta Dinka	Procurement Specialist (ADM Responsible)		GGO01
Enagnon Ernest Eric Adda	Financial Management Specialist		GGO31
Sofia De Abreu Ferreira	Senior Counsel		LEGEN
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Aira Maria Htenas	Team Member		GFAGE
Dimitrie Mukanyiligira	Team Member		AFMRW
Bettina Ruzima	Team Member		AFMRW

Extended Team

Name	Title	Organization	Location

REPUBLIC OF RWANDA

STUNTING PREVENTION AND REDUCTION PROJECT

Table of Contents

I. STRATEGIC CONTEXT **1**
II. PROJECT DESCRIPTION **9**
A. Project Development Objective(s) 9
B. Project Beneficiaries 9
C. PDO-Level Results Indicators 10
D. Project Components 10
E. Project Cost and Financing 16
F. Lessons Reflected in the Project Design 17
III. IMPLEMENTATION **20**
A. Institutional and Implementation Arrangements 20
B. Results Monitoring and Evaluation Arrangements 22
C. Sustainability 23
D. Role of Partners 23
IV. KEY RISKS **24**
A. Overall Risk Rating and Explanation of Key Risks 24
V. APPRAISAL SUMMARY **24**
A. Economic and Financial Analysis 24
B. Technical 27
C. Financial Management 28
D. Procurement 29
E. Social (including Safeguards) 32
F. Environment (including Safeguards) 32
G. World Bank Grievance Redress 33
VI. RESULTS FRAMEWORK **34**
ANNEX I: EXPECTED RESULTS CHAIN **38**
ANNEX II: WORLD BANK PROGRAM **39**

I. STRATEGIC CONTEXT

A. Country Context

1. **Rwanda has made substantial progress in reducing poverty levels, and increasing agricultural production.** Rwanda has consistently outperformed other countries in the region on many indicators of socio-economic development. With the country's economy growing at more than eight percent per year, the share of the population below the national poverty line dropped from about 50.0 to 39.1 percent during 2011-2014. Rwanda has also seen a small reduction in inequality, with the Gini coefficient decreasing from 0.49 to 0.45 between 2011 and 2014. The country's score on the Global Hunger Index, a composite indicator of undernourishment and child mortality, dropped by about 40 percent during 2000-2017 (IFPRI, 2013). The gains in poverty reduction have been accompanied by impressive progress in human development, including meeting most of the Millennium Development Goals (MDGs) by 2015.

2. **Nevertheless, there are persistent concerns with food insecurity, in part due to low agricultural productivity, climate change effects, and food price fluctuations**. Although household-level agricultural production more than doubled during 2001-2011, productivity remains low. Most farmers practice subsistence farming on small, hilly plots, and use of improved seeds, pesticides and fertilizers is still limited. The predominantly rain-fed production is affected by long droughts or heavy rains, often causing flash floods. Even though food is generally available, most is sourced from the market, making households vulnerable to food price increases, and compromising food security (WFP, 2016).

3. **Rwanda's Vision 2050 sets an ambitious agenda for further improvements in the standard of living.** Targets to address food insecurity and malnutrition and to further reduce poverty are evidence of the political commitment to the twin goals of poverty reduction and shared prosperity. There is broad based recognition that stunting (*chronic malnutrition*) represents an impediment to Rwanda's aspiration to become a middle-income country, given its long-term negative effects on human capital development.

4. **The President of Rwanda has recently made a strong commitment to dramatically reduce and eventually eliminate childhood stunting**. To respond to this commitment, the World Bank, in collaboration with a multi-sectoral government counterpart team, has developed an integrated program to combat chronic malnutrition which is based on global evidence, with a focus on high stunting districts, vulnerable populations and the critical 1,000 days beyond which stunting becomes largely irreversible. The World Bank program aims to: (i) support cross-sectoral interventions through operations in health, social protection, and agriculture; (ii) promote innovations in service delivery; and (iii) leverage private sector resources from the Multi-Donor Trust Fund for Achieving Nutrition Impact at Scale (MDTF), an independent fund for nutrition focused on saving lives and catalyzing new resources and support for high-impact nutrition programs globally; and the Global Financing Facility (GFF), a broad financing partnership that supports countries to get on a trajectory to achieve the Sustainable Development Goals (SDGs) by strengthening dialogue among key stakeholders under the government's leadership.[1]

[1] More specifically, the GFF aims to: (i) support identification of a clear set of priority results that all partners commit resources to achieving; (ii) get more results from existing resources and increase the total volume of financing; (iii) strengthen systems to track progress, learn and cost-correct.

B. Sectoral and Institutional Context

5. **Over the past fifteen years, Rwanda has made dramatic progress in improving infant and child survival and women's health**. With the rapid scale up of basic health services and improvements in socio-economic conditions both under five and infant mortality rates declined sharply during 2000-2015 (i.e. from 196 to 50 per 1,000 live births, and from 107 to 32 per 1,000 live births, respectively). Maternal mortality ratio also dropped steeply from 1,071 (2000) to 210 (2014) per 100,000 live births. The expansion in family planning services, combined with delayed childbearing, has resulted in a steep drop in fertility during the past ten years (i.e. from a total fertility rate of about 6.0 to slightly above 4.0). Malaria control has also been strong, but there has been a recent spike in the number of cases (i.e. 1 million additional cases).[2] The nutrition situation among young children remains an outlier with Rwanda needing to redouble its efforts.

Levels, trends and patterns in malnutrition

6. **While the Sustainable Development Goal (SDG) target on wasting (*acute malnutrition*) has already been met, and there have been substantial declines in stunting between 2010 and 2015, the stunting rate has remained stubbornly high** (38 percent, 2014/2015). Moreover, there are large disparities in the distribution of stunting in Rwanda.[3] There is evidence that the risk of stunting also rises with birth order, with prevalence climbing to nearly 50 percent for fourth order births, underscoring the importance of further reductions in both fertility and stunting. While prevalence of exclusive breastfeeding in the first six months is high (87 percent) and helps protect infants from early growth faltering, there is a steep and progressive rise in stunting after weaning (i.e. from 21 percent in 9-11 month olds, to over 49 percent in 18-24 month olds). This is a common pattern in many developing countries, as a child is introduced to greater disease risks through inadequate complementary feeding and inappropriate hygiene practices combined with limited access to clean water. Stunting remains largely an invisible problem in Rwanda, and requires a fundamental shift in awareness and enhanced information on what can be done to address it.

7. **Over the past fifteen years, there have been encouraging trends in many of the underlying determinants of malnutrition among Rwandese children** (i.e. *care practices, environmental health, food adequacy*). The most significant improvements have occurred in care practices, including coverage of antenatal, birth, and postnatal care. Delivery in health facilities has increased significantly and is almost universal (i.e. from 25 percent in 2000 to 92 percent in 2015), with high levels of coverage prevalent across all wealth quintiles. here have also been remarkable improvements in the use of insecticide treated nets by children. Despite these improvements, coverage of some interventions remains low (i.e. 20 percent for child postnatal care; 42 percent four or more antenatal care visits; and 3 percent of women report taking the recommended dose of 90 or more days of iron folic acid tablets during pregnancy).

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[2] The increase in malaria cases in 2015/2016 has been largely among children over five and adults, with the malaria control program intensifying communication campaigns and piloting a screen and treat program for pregnant women.

[3] Stunting affects nearly 50 percent of children from the poorest households, in comparison to 21 percent of those from the richest. Boys (42 percent) are more likely to be stunted than girls (33 percent), and this disparity starts from birth and persists through the first two years of life. Childhood stunting remains high in rural areas (41 percent) compared to urban areas (24 percent).

8. **There have also been important improvements in environmental health but important gaps and geographic variations persist**. Since 2005, access to improved water and sanitation facilities has more than doubled. Nevertheless, infants and children from vulnerable and poor households in rural areas have significant deficits in environmental health that places them at a greater risk of stunting. The 2014/2015 Demographic and Health Survey (DHS) found that: (i) 32 percent of the rural population still rely on non-improved sanitation facilities and 11 percent have access to an improved but shared facility; (ii) roughly 60 percent of the rural households do not treat water prior to drinking; and (iii) over 91 percent of households do not have a handwashing station.[4] Collectively, these deficits represent major challenges to the health of infants and children. Because of poor sanitation and hygiene practices, children face increased exposure to helminthic infections and greater risk of chronic diarrhea and enteric pathogens, conditions which may lead to the malabsorption of nutrients from food.[5]

9. **Trends in food adequacy have remained largely inadequate.** The proportion of infants under six months who are exclusively breastfed has remained consistently above 80 percent. For children between 6-24 months, there has been little improvement in food intake during the 2010-2015 period with only 18 percent considered to have a minimum acceptable diet; less than 50 percent benefitting from minimum meal frequency; and 29 percent receiving the minimum dietary diversity.[6] The pattern of decreased food adequacy after the first six months, with inadequate feeding practices increases the risk of micronutrient deficiencies and exposure to infections, and coincides with higher prevalence of stunting among infants 6-24 months old.

10. **Household food security remains highly variable**.[7] Food insecure households are dependent on low-income agriculture, reinforcing the centrality of agricultural productivity for household food security. These households have less livestock, less agricultural land, grow fewer crops, are less likely to have a vegetable garden, have lower food stocks and consume more of their own production at home. They have less diversified diets[8], contributing to micronutrient deficiencies. Inadequate dietary intake of iron is amongst the most common causes of anemia in Rwanda (2014/2015 DHS). Rwanda has experienced success with biofortification, a process by which crops are bred to increase their nutrition value, addressing micronutrient deficiencies.[9]

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[4] In addition, less than 3 percent of the rural population has access to small piped water schemes with about one quarter relying on public taps/stand posts; 36 percent using protected springs; and roughly 31 percent fetching water from unimproved sources.

[5] It is estimated that Rwandese children in households that do not have access to treated drinking water are three times more likely to be stunted compared to households with access to treated piped water supply (Rwanda Agriculture Board, 2015).

[6] WHO and UNICEF recommend: (i) minimally diverse diet (four or more food groups); (ii) age-appropriate minimum meal frequency; and (iii) minimum two milk feedings for those no longer breastfeeding.

[7] The 2015 Comprehensive Food Security and Vulnerability Analysis (CFSVA) found that *40 percent of all households are food secure* (i.e., able to meet essential food and non-food needs without engaging in coping strategies, have an acceptable diet and use a low share of their budget to cover food needs); *40 percent are marginally food secure*; and *17 percent and 3 percent are moderately or severely food insecure.*

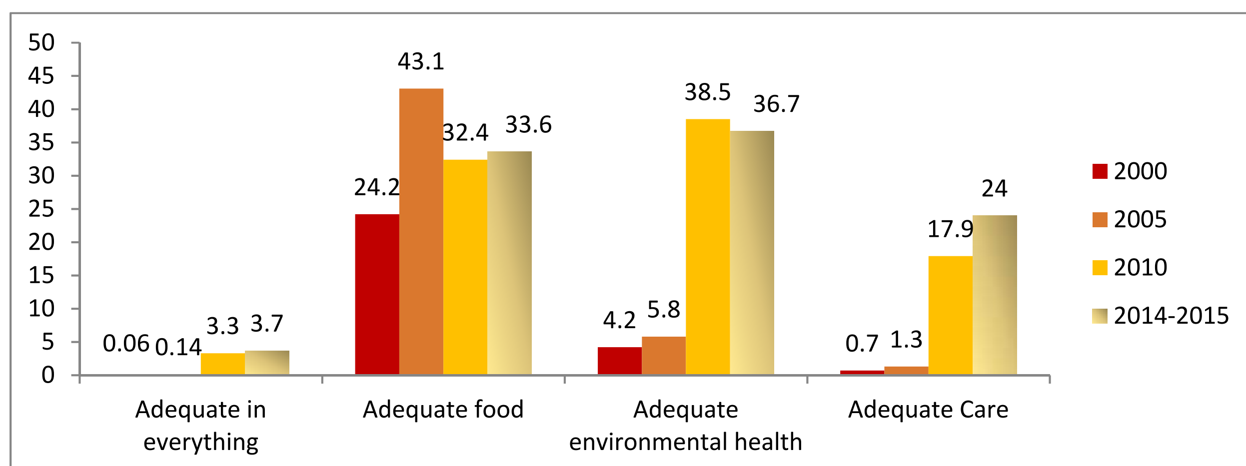
[8] Starches (i.e. including cereal and tubers) and pulses constitute the primary staple food in Rwanda. Food insecure households rarely consume pulses and legumes, while fruits and animal proteins (i.e., meat and milk) are consumed even less (Food and Nutrition Security Monitoring System, Round 11, 2015).

[9] HarvestPlus has been supporting the Rwanda Agriculture Board (RAB) to breed, test, and release varieties of iron beans developed in partnership with the International Center for Tropical Agriculture (CIAT). Biofortified beans provide up to 50 percent of daily iron needs, and have desirable agricultural traits: high yielding, virus resistant, and heat and drought tolerant. Similarly, the International Potato Center (CIP) together with RAB has been promoting

11. **Most household food items are market-sourced, and although food is generally available in the markets, 50 percent of households experience difficulties in accessing food** (2015 CFSVA). The most common access issues were seasonal difficulties in accessing food. Households with low purchasing power have difficulties accessing markets, even when prices are stable. Households which are dependent on markets for food, and those with low purchasing power, are particularly vulnerable to increasing food prices.[10] In addition to seasonal obstacles in accessing food, 27 percent of all households experienced one or more shocks (i.e. drought, irregular rains, prolonged dry spells) that affects their ability to access food.

12. **When analyzing access to all three critical determinants of malnutrition--care practices, environmental health and food adequacy-- significant gaps persist.** In total, only 24 percent of children under two receive *adequate care;* 37 percent have *adequate environmental health;* and 34 percent of children under two have a *minimally acceptable diet*. Less than 4 percent have access to all three critical dimensions, illustrating that important gaps in convergence of interventions remain to be addressed to have a more dramatic impact on stunting (Figure 1).[11]

Figure 1: Trends in coverage of underlying determinants of malnutrition



13. **It is well recognized that childhood stunting elevates the risk of morbidity and mortality and increases the potential for intergenerational transmission of stunting and poverty.** In the long-term, stunting delays cognitive development and lowers educational attainment, with children who do not reach their full development potential at an early age more likely to do poorly in school and achieve lower lifetime earnings. A recent study estimated that 22 percent of all child mortality and 13 percent of primary school repetitions in Rwanda are associated with undernutrition, with stunted children achieving an average of 1.1 fewer years in school. The health and nutritional status of pregnant and lactating women contribute to the intergenerational transmission of undernutrition.[12] Sixteen percent of Rwandese women report that their newborns were "smaller than average" or "very small" at birth; 19 percent of all women and nearly 25 percent of pregnant women are anemic; and roughly 7 percent have low maternal Body Mass Index

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orange-fleshed sweet potato (OFSP) in different parts of the country to combat vitamin A deficiency (VAD). Research has shown that the beta-carotene in OFSP can improve vitamin A status (CIP, Rwanda).

[10] Food inflation reached a peak of about 31 percent during the 2008 food price crisis.

[11] *Rwanda Situation Analysis and Policy Options*, The World Bank, June 2017.

[12] Women who are of short stature (i.e. less than 145 cm. tall), a likely result of childhood stunting, are more likely to have children with restricted growth during pregnancy.

(BMI), a measure of thinness, suggesting deficiencies in maternal nutrition, which can lead to obesity later in life.

14. **Evidence suggests that poverty is not the only driver of stunting.** Analysis conducted by the World Bank found the highest stunting rates are in the west of the country-- *Nyamagabe, Nyabihu, Ngororero*— districts targeted for World Bank support through this project-- while the highest poverty rates are in different districts-- *Nyamasheke, Gisagara, Rutsiro*—some of which are also targeted for support. In addition, 2015 CFSVA results point to a convergence of food insecurity and stunting. Food insecurity is high in the western and northern parts of the country with some of these districts also having high rates of stunting.[13] These patterns may be explained by inadequate knowledge and practice of appropriate childcare and feeding practices (e.g. food diversity; meal frequency) and inadequate access to appropriate food, as well as deficient Water, Sanitation and Hygiene (WASH) practices across all wealth quintiles. The analysis also showed that mother's education is another key determinant of stunting, with children of mothers with some secondary education less likely to be stunted.

Health System Barriers

15. **Supply-side barriers have impeded the scale up and coverage of high-impact interventions.** Primary health care workers and caregivers need to be better trained, motivated and mentored; the supply chain for timely distribution of nutrition commodities needs to be reinforced to reduce stock outs of critical inputs; information systems need to be more agile to enhance tracking and follow-up of children at risk to become stunted. The national performance based financing scheme does not include a comprehensive set of incentives for critical nutrition interventions that will lead to a reduction in stunting. Finally, the current health communication strategy is limited in its focus on stunting, and an inconsistent set of tools and messages are used by different ministries and development partners, which calls for harmonization and alignment in the design and delivery of messages around childhood stunting.

16. **The quality and efficiency of key platforms for delivering core interventions at the community level need to be improved.** The national Community Health Worker (CHW) program, which includes 45,000 CHWs, plays an important role in improving knowledge of child care practices, and ensuring follow up and referral of vulnerable women and children (Box 1). A recent evaluation of the program found that CHWs have variable workloads, are not systematically remunerated, do not benefit from regular training and mentoring, and their performance is hindered by stock outs of medicines and critical commodities.[14] There is a need to review the current CHW model and explore strategies for making the program more structured and sustainable. To this end, the World Bank has funded analytic work to review the experience of other countries with CHW models that foster sustainability. Preliminary findings of the study are being woven into the design and are expected to inform a broader policy dialogue about the future of the CHW program. The goal is to use the project as a platform for rendering Rwanda's flagship CHW program more performant.

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[13] Rutsiro (57 percent), Nyamagabe (42 percent), Nyabihu (39 percent), Nyaruguru (37 percent), Rusizi (36 percent), Karongi (35 percent) and Nyamasheke (35 percent) have the highest percentages of food insecure households.

[14] *Comprehensive Evaluation of the Community Health Program in Rwanda*, Liverpool School of Tropical Medicine, November 2016.

17. **Demand side barriers to address stunting include socio-cultural factors, geographic and financial impediments to accessing health services, and general levels of poverty and vulnerability.** Unlike acute malnutrition, stunting tends to be an invisible problem that stems from inadequate knowledge and awareness at the household and community levels. Geographic and financial barriers to accessing services persist, particularly for the poor and vulnerable. Similarly, WASH interventions need to be more affordable for poor and vulnerable rural households. Despite the excellent progress made to tackle poverty and vulnerability, roughly 40 percent of households still fall below the poverty line, and are highly dependent on a precarious subsistence agricultural economy characterized by small land holdings, low productivity, and high vulnerability to climate change and rainfall patterns, factors which impede food security and nutrition outcomes.

18. **The coordination and financing of best buy interventions needs to be improved to promote convergence of interventions that is critical for stunting reduction**. While Rwanda benefits from financing for nutrition from several major development partners (i.e. USAID, UNICEF/Netherlands) there are persistent financing gaps and challenges in ensuring synergies between investments. All 30 districts benefit from some funding for interventions, but not all sectors are covered, few of the required interventions are provided to scale, and coverage of beneficiaries varies widely.[15] In addition, a clear focus on stunting prevention at the community level is still largely missing. Planning, implementation and monitoring of WASH interventions also needs to be better coordinated with the broader stunting

Box 1: Community Health Worker Program

Rwanda's Community Health Worker program has effectively served as a complementary platform to the formal health sector in delivering a package of preventive and curative services at the community level. CHWs are a key point of contact for families during the critical 1,000-day window from pregnancy to a child's second birthday and hence play a key role in improving nutrition. Every village (around 100–250 households) has three CHWs - two *binômes* (one man and one woman) focused primarily on case identification and referral for a variety of diseases, and one *Agent de Santé Maternelle (ASM*), responsible for identification of pregnant women, antenatal care visits, and ensuring delivery at health facilities, as well as health promotion and BCC activities. To incentivize CHWs, Rwanda expanded the facility-based PBF scheme to these frontline workers in 2008. CHWs are evaluated and remunerated based on performance incentives that are distributed to CHW cooperatives and individuals at a ratio of 70/30 percent, respectively.

The CHW national program has made remarkable progress since it was introduced in 1995 and is internationally recognized for its success in contributing significantly to the reduction in child and maternal mortality. The program has been highly effective in absorbing a portion of the demand for services and creating a platform that complements the formal health sector in delivering a package of critical services. CHWs are highly valued and respected by the communities in which they serve and the intrinsic motivation combined with performance incentives serve to boost motivation and performance. At the same time, several design and operational issues undermine the full potential of the program. First, CHWs are volunteers who do not have the ready-made status of professionals. Second, the current training and supervision model is not sufficient to ensure these workers are fully performant and motivated. Finally, there are intermittent disruptions in the supply of drugs and commodities.

[15] The Rwanda Stakeholder and Action Mapping exercise conducted several years ago, found that coverage of core nutrition actions, as defined by the percentage of actions with at least 30 percent of the target population covered, ranges from 32 percent in Kicukiro to 81 percent in Nyamagabe, with most the districts falling in the range of 40-60 percent. The three actions that had the most gaps in coverage included: (i) coverage of complementary feeding; (ii) provision of micronutrient supplements; and (iii) support for improved water source.

reduction agenda. The recently established district WASH Boards need to play a greater role in ensuring that the most vulnerable groups are targeted for intervention.

19. **While all 30 districts have *District Plans to Eliminate Malnutrition* (DPEM), further work is needed to make these effective tools for delivering a full set of cross-sectoral interventions, converging on the most vulnerable households**. Most districts face several key barriers, including: (i) limited human resources; (ii) inadequate operating budgets; (iii) weak multi-sectoral coordination; and (iv) inadequate accountability mechanisms. There is need to enhance capacity to monitor and coordinate the wide range of government and donor-funded intervention; to ensure the efficient and effective delivery of a comprehensive package of nutrition interventions; and to strengthen the quality and relevance of the DPEMs. Kirehe District in Eastern Province offers a unique example of a district that mobilized high level support, brought together all stakeholders, and effectively leveraged the decentralized service delivery architecture (Box 2).

Government Strategy

20. **The Government of Rwanda has put the elimination of stunting high on the country's political and development agenda**, with food security, nutrition, and early childhood development prioritized as foundational issues to address within the *Economic and Poverty Reduction Strategy* (2013–2018) and in the forthcoming *National Strategy for Transformation and Prosperity* (2017-2024). Rwanda has been a member of the Scaling Up Nutrition (SUN) Movement since 2011, and established a Joint Action Plan to Eliminate Malnutrition (JAPEM 2016-2020). In recognition of the importance of the first 1,000 days of life, the government launched the "*1,000 days campaign in the land of 1,000 hills*" initiative in 2013. The government has prepared a strategy for accelerating the reduction in childhood stunting, setting more ambitious goals, targeting those who are harder and more expensive to reach.

Box 2: Kirehe District

The race to the Top—Inkera y'imihigo

Kirehe district serves as a model of how a holistic approach can be adopted to deliver strong results. The district had the highest decline in stunting in children under two (i.e. from 49 to 7 percent) between 2010 and 2015. Local leaders and district development partners attribute the district's achievements to several factors: (i) high-level district leadership on stunting; (ii) commitment to convergence and promotion of multi-sectoral collaboration; (iii) strong governance mechanisms, whereby the DPEMs were institutionalized, through regular monitoring of progress and timely course correction measures; (iv) introduction of competition between sectors to achieve reductions in childhood malnutrition (*The race to the Top campaign*); (v) inclusion of nutrition indicators in performance contracts at all levels, including at household level; (vi) consistent follow-up by CHWs to bolster demand; and (vii) provision of one cup of milk at least once a week for all children under five through home-based early childhood development centers. While CHWs played a key role in working with vulnerable households, district authorities used the contractual approach to hold other sectors responsible for results. Kirehe district demonstrates the importance of the convergence agenda to stunting reduction, and provides important lessons for other districts in the country.

21. **Recognizing the role of early childhood development (ECD) in improving human capital, the government has recently strengthened the policy and institutional framework for investing in the early years**. The Ministry of Gender and Family Protection (MIGEPROF) will be the lead institution for the coordination, monitoring, and evaluation of the implementation of the ECD policy. The ECD policy promotes integrated planning of multi-sectoral activities across ministries, and allows for implementation

of different models, from formal center-based to home-based models involving a small set of neighboring households. The policy calls for the development of an integrated curriculum that addresses cross-cutting issues of childcare, education, growth and development, safety and security.

22. **The national agenda to realize significant reduction in childhood stunting is now more closely integrated with the larger ECD strategy.** The newly created National Early Childhood Development Coordination Program (NECDCP), established under the MIGEPROF, is now responsible for coordinating government and donor-supported nutrition programs. The government plans to use home-based or community based ECD models as entry points for reaching infants, children, and mothers during the critical 1,000-days window.

23. **The government aims to leverage its sound social protection system to address stunting, by targeting vulnerable families with income support, financial services, and public works that are more gender and child sensitive**. The World Bank-supported Strengthening Social Protection Project (P162646), will finance novel approaches, including: (i) community and home-based parenting and childcare interventions for vulnerable families as part of the extended public works scheme; (ii) behavioral change communication, in coordination with the Rwanda Biomedical Center (RBC) developed sensitization campaigns; and (iii) nutrition support grants targeted to most vulnerable households (*ubudeh*e 1) with pregnant women and children under two. The conditional nutrition support grants will be rolled out in the same districts targeted for support under this project, with requirements for use of maternal and child health services and parenting sessions.

24. **The government views investments in health as critical to human capital development**. The government allocation to the health sector has ranged between 9 and 11 percent over the past three years. Authorities have produced an updated *Health Financing and Sustainability Strategy* (2015) that aims to: (i) increase efficiency and ensure value for money by reducing administrative costs and expanding performance based financing; (ii) strengthen health insurance and risk pooling; and (iii) expand domestic revenue mobilization, including community and private sector financing.

25. **A key challenge facing the government is to ensure the financial sustainability of its health sector achievements in an environment of unpredictable development assistance**. The health sector has historically been dependent on donor financing and subject to fluctuations and external shocks. Financing of nutrition-specific interventions remains largely reliant on donors. Financing of WASH interventions in rural areas remains inadequate. The government has been effectively using donor support for advancing its renewed commitment to eliminate stunting and is keen to accelerate this progress. Attracting new development partners is critical to the government's ambitious stunting elimination strategy, and offers the opportunity to add stunting reduction to Rwanda's numerous achievements.

C. Higher Level Objectives and Results Chain

26. **The proposed project responds to the government's high-level commitment to combat stunting and is an integral part of a larger World Bank program that aims to address the socio-economic determinants of stunting**. The proposed project is aligned with both the Rwanda Country Partnership Strategy (FY2014-2020; Report No. 87025-RW) and with the government's ambitious goals to combat chronic malnutrition as described in the Economic Development and Poverty Reduction Strategy. The higher-level objective is to reduce and ultimately eliminate childhood stunting in Rwanda. Given that

this is a long-term endeavor and that this project, as well as the overall program, will only reach a targeted number of districts, the World Bank support should be viewed as an important medium-term contribution to this national priority.

27. **The joint World Bank program includes three projects to be delivered in FY18 that will support a wide range of complementary nutrition interventions, overlapping in some geographic areas to maximize synergies and promote convergence that is critical to addressing the multi-sectoral nature of stunting** (Annex II). The integrated World Bank program aims to support a community-based approach to the Early Years and stunting reduction goal that empowers and holds accountable local authorities, relies on decentralized structures, and promotes broad based social mobilization and ownership. To this end, the program aims to: (i) increase coverage and quality of *high-impact health and nutrition interventions* (health) and *child caring, feeding and WASH practices* (health, social protection, agriculture); (ii) introduce *conditional nutrition support grants* as a component of the expanded direct support; and gender and child sensitive models of expanded public works (social protection); and (iii) strengthen *food security* and dietary diversity (agriculture).

28. **The program includes several cross cutting dimensions**: (a) *behavioral change communications* to bring about a paradigm shift in the way Rwandans think about stunting and to improve child caring, feeding, and WASH practices; and promote nutrition-sensitive agriculture practices; (b) *targeted support* to high stunting districts, poor and vulnerable populations, and the first 1,000 days; (c) *service delivery innovations*, such as home-based, community-based ECD models; interactive technologies and interoperable information systems for prompt identification of growth faltering; and results-based approaches to enhance accountability at all levels; and a (d) *learn by doing approach* that will determine what works and how it can be scaled up. Likewise, the World Bank program places a premium on leveraging successful platforms for delivering services, such as the CHW program, and enhanced local government capacity, which are critical for the effective delivery of services across multiple sectors.

II. PROJECT DESCRIPTION

A. Project Development Objective(s)

29. The proposed Project Development Objective (PDO) is to contribute to the reduction in the stunting rate among children under five years of age (with a focus on those under two) in the targeted districts.

B. Project Beneficiaries

30. The main project beneficiaries will consist of children under five (particularly children under two to reach them in the critical 1,000-day window of opportunity, before stunting becomes largely irreversible), as well as pregnant and lactating women in 13 districts with high levels of stunting that government has prioritized for World Bank support. Other beneficiaries will include adolescent girls, to reach women early and improve their health and nutrition status prior to entering their reproductive health years. The poorest households will benefit from improvements in access to clean water and improved sanitation facilities, and the public at large will benefit from national media campaigns and revamped behavioral change communications.

C. PDO-Level Results Indicators

31. Progress towards stunting reduction will be monitored through appropriate impact indicators and intermediate indicators that focus on practices and behaviors that are known to have an impact on the nutritional status of infants and children and pregnant and lactating women. The main PDO level indicators will include: (1a) percentage of children under five years with height-for-age z-score below -2 standard deviations of the median for the WHO reference population; (1b) percentage of children under 2 years with height-for-age z-score below -2 standard deviations of the median for the WHO reference population; (2) percentage of children 6-23 months old who are fed a diverse diet; (3) percentage of women who attended four or more antenatal care visits during their most recent pregnancy; and (4) number of beneficiaries of project interventions. All indicators will be calculated based on denominators in the geographic areas covered by the project and disaggregated by district and gender, as relevant.

32. The Results Framework (Annex I) was discussed and finalized during negotiations. On the stunting reduction target, the government team noted that all districts are expected to reach the 19 percent target by 2024, in line with 2018-2024 Health Sector Strategic Plan. Given that the 13 districts currently have an average stunting rate for children under five of about 43.6 percent (37.1 percent for children under two), based on global evidence, it may prove exceedingly difficult to attain this ambitious 19 percent target in such a short time span, albeit it may be possible to do so over a longer time frame. In the spirit of bending the arc, and better aligning the targets for the 13 districts with the national target, it was discussed and agreed during negotiations to set an ambitious target of 32.0 percent for the 13 districts by the end of the five-year period. This scenario assumes complementary funding from other development partners and from the broader World Bank program; enhanced multi-sectoral coordination; a rapid start-up with immediate and significant effect of these interventions on stunting; and no exogenous shocks that undermine food security in the 13 districts. Finally, it was agreed that the baseline data would be collected for the 13 districts, using the forthcoming Comprehensive Food Security and Vulnerability Analysis Survey. This will serve as the basis for updating the baseline and target figures.

33. The project will also support the achievement of key indicators through the national performance based financing scheme, including: (i) percentage of women who attended four or more antenatal care visits during their most recent pregnancy (PDO indicator); (ii) percentage of women and children who attended at least four postnatal care visits after delivery; (iii) percentage of women who use modern contraceptives; (iv) percentage of children participating in height monitoring and growth promotion at health facilities and followed up by CHWs; (v) number of pregnancies identified by CHWs during the first trimester; and (vi) percentage of CHWs who receive a quarterly supervision visit from health facility.

D. Project Components

34. The project will support the government to adopt and implement a bold, new national strategy to improve the visibility of stunting in Rwanda, and to deliver harmonized behavior change messages across various platforms. While other development partners have engaged in important ways to combat malnutrition, what is transformational and ambitious in this project is the engagement in interventions across multiple sectors, leveraging and strengthening existing and new institutional structures to mobilize stakeholders; improve ownership and accountability; and ensure convergence of key interventions at the household and individual levels. Interventions span the full 1,000 days window, with innovations to also target the health and nutrition of adolescent girls.

35. The project will strengthen accountability by aligning incentives and actions at several critical levels: (i) incentivizing frontline CHWs; (ii) improving accountability of health personnel through the national PBF schemes; (iii) providing grant funds to district authorities to support the convergence agenda, build capacity to mount the multi-sectoral response, and ensure effective implementation and monitoring of the DPEMs; and (iv) incorporating nutrition indicators in the *imihigo* contracts between the President and respective mayors. The project will adopt a phased, learn by doing approach, underpinned by a solid operational research agenda around convergence, behavioral change, and performance based approaches.

36. The grant funds from the MDTF and GFF will co-finance IDA credit resources for both this project and the social protection operation, two projects that have been prepared in tandem, and to be implemented in a coordinated fashion. With respect to the Stunting Prevention and Reduction Project, the MDTF grant will fund the full scale up of the delivery of a package of high impact health nutrition specific interventions; and co-finance communication campaigns and learning, knowledge sharing, and monitoring and evaluation (M&E). The GFF grant will co-finance the: (i) CHW program; (ii) district multi-sectoral response; and (ii) learning, knowledge sharing and M&E. The IDA credit will fund the bulk of the remaining activities under component 1; and project management.

37. The GFF will bring about several key benefits for Rwanda. First, it will strengthen multi-sectoral coordination, promote evidence-based multi-sectoral interventions, and leverage/improve key platforms (CHW), to implement the convergence approach. Second, it will support the government to improve efficiency and expand spending on high-impact, evidence based nutrition specific and nutrition sensitive interventions. Third, it will put in place mechanisms for measuring and tracking progress, as well as supporting continuous learning and knowledge sharing on innovations supported through the World Bank project/program. The GFF process will be guided by an investment case that includes well-prioritized high impact multi-sectoral interventions to address stunting with a clear focus on results and alignment of financing to the priorities. The design, implementation and monitoring of the investment case will be driven by a government-led country platform that brings together key stakeholders.

38. The Results Chain in Annex I depicts the proposed activities and expected results. It illustrates how the project will leverage two of Rwanda's strongest platforms (i.e. CHW, PBF); improve knowledge and promote behavior change; reach key beneficiaries with a comprehensive set of interventions; and strengthen home-based ECD to contribute to stunting prevention at the community level. DPEMs will serve as the basis for financing activities at the decentralized level. Districts will be expected to prepare updated, consolidated work plans for financing under the project, with clear strategies and targets, showing what other partners are financing and what gaps persist. The project bolsters coordination, strengthens country systems, and empowers and mobilizes local stakeholders.

39. The Government of Rwanda has selected 13 priority districts for World Bank support, based on three criteria: (i) *high stunting levels*; (ii) proportion of the *population who are poor or extremely poor*; and (iii) percent of *households with moderate or severe food insecurity,* with the highest weight given to stunting prevalence. The proposed districts are as follows: Nyabihu, Ngororero, Karongi, Rubavu, Rutsiro, Rusizi, Nyamagabe, Huye, Nyaruguru, Ruhango, Gakenke, Kayonza and Bugesera. Three of the districts (Nyabihu, Karongi, and Kayonza) are part of the World Bank-funded agriculture project, allowing for targeted complementary interventions at the household level. The social protection project is designed to target poor and vulnerable households with pregnant women and young children in selected sectors of the same

districts, thereby reaching beneficiaries with an appropriate mix of supply and demand side interventions. Figure 3 (Annex II) illustrates the geographic coverage of the program.[16] Interventions to be funded under each component are described below.

Component 1: Prevention of Stunting at Community & Household Levels (US$35.0 million equivalent)

40. This component will support the government to improve awareness of stunting, and deliver harmonized behavior change messages at all levels (i.e. national, local government, and household) and across several key sectors (i.e. health, social protection, agriculture, water and sanitation). It will support the Ministry of Health (MoH)/RBC to implement, monitor and evaluate the revamped national, multi-sectoral behavioral change communication strategy, building on work funded by USAID and the European Union.

41. This component will boost the productivity and performance of CHWs and explore options for professionalizing them. CHWs will benefit from enhanced training on a revised curriculum focused on reinforcing household behavior change on complementary feeding, early childhood stimulation, and hygiene; improved supportive supervision and mentorship; innovative technologies to enhance their effectiveness and strengthen links to the health system; will be incentivized through the PBF scheme; and will benefit from strengthening of the commodity supply chain. These interventions, to be supported at scale by both the World Bank and other partners, are critical for enhancing performance of CHWs and driving the program's success. CHWs will continue playing a role in raising awareness about stunting, carrying out growth promotion activities, and sensitizing ECD caregivers and communities on the importance of proper child growth.

42. In parallel, the World Bank team is sharing with the Rwandan authorities the experience of other countries in professionalizing CHWs, and has engaged in a policy dialogue to explore different options. These inputs will enable generation of empirical lessons from implementation experiences, and inform the government on the pros and cons of different models. The World Bank team is currently discussing several strategies that could be tested as part of the project, including: (a) designing a new cadre of CHWs with higher qualifications, diplomas/certificates, who are remunerated; and (b) revamping the current CHW cooperative model to generate more income and better incentivize the delivery of priority health interventions. Given the fast-track preparation of this project, and the intrinsically complex nature of these issues, the goal is to incorporate these activities as part of the learning agenda that allows for innovation, continuous assessment and incorporation of lessons learned into the national program.

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[16] While the goal is to maximize convergence of interventions in the same geographic areas across the World Bank program, each of three projects has its unique history and criteria, hence there will not be complete overlap.

43. Component 1 will also roll out different community based approaches and strategies for bringing about behavioral change such as home-based early childhood development models and positive deviance strategy. While the bulk of the proposed interventions address behavioral change, to address deficits in access to clean water and improve sanitation facilities that contribute to the high stunting rates, the component will also support complementary WASH interventions targeted to the most vulnerable groups (*ubudehe* 1 households) in the 13 participating districts. Finally, Component 1 will strengthen accountability mechanisms and governance structures at the community and district levels to bolster the multi-sectoral response. More specifically, the project will: (i) support the design and implementation of a new national communication strategy, including a state of the art media campaign and innovative communications tools customized to the Rwandan context; (ii) train, mentor, and equip CHWs to conduct growth promotion, including early identification and follow-up of children falling behind; behavior change communications on enhanced infant and young child care, feeding, and WASH practices; health and nutrition education for pregnant and lactating women and early referral to health facilities for nutrition services and health checkups; and to work closely with agricultural officers and the Twigire Muhinzi extension model, the local adaptation of the Farmer Field School (FFS) approach, on nutrition related content for extension services, such as nutrition-sensitive agriculture practices, and food preparation, processing and cooking demonstrations, and hygiene and sanitation during food preparation to maintain nutrition value of foods); this would include developing strategies and approaches based on the positive deviance methodology (i.e. focusing on factors that explain nutritional success rather than failure), in collaboration with other key stakeholders (i.e. Ministry of Local Government, MINALOC, Ministry of Gender and Family Promotion, MIGEPROF, Ministry of Agriculture and Animal Resources, MINAGRI); likewise, the component would also support innovations to improve pre-conceptional nutrition of women through

Box 3: *Investing in the Early Years*

Early Childhood Development (ECD) will serve as an entry point for addressing undernutrition, in line with the recently issued ECD policy. While the government has ambitious plans to establish ECD centers in each village, in the first instance under this project it was agreed that support would be provided to strengthen home-based ECD sites. The experience of several NGOs in Rwanda (i.e. Imbuto Foundation, CARE International) found that the home-based model is cost effective, encourages parental involvement, and represents a good option for reaching children too young to attend ECD centers.

The home-based ECD sites will serve as models in their communities with caregiving provided by parents, fostering ownership and building solidarity. Caregiving will be provide by a lead caretaker selected by parents and one rotating assistant (possibly a beneficiary of the Extended Public Works home-based model). Parents will contribute to the functioning of the home-based ECD groups through in-kind contributions (e.g., ingredients for nutritious meals to be provided to children daily). The project will fund: training of caregivers; equipment and basic supplies; hand washing stations and latrines (as needed); and small grants.

Each home-based ECD group will comprise 10-15 children, up to five years. The package of services includes early learning and stimulation, parenting/childcare education, hygiene and sanitation education, and complementary feeding and cooking demonstrations. Mothers with children under two years will represent a special target group, given the importance of reaching children in the 1,000-day window. Parents of children 6-24 months will visit the home-based ECD sites to discuss challenges and share practical solutions.

Home-based ECD groups will be supported by CHWs and other community based proximity service volunteers (agriculture, WASH, friends of the family), to disseminate messages most efficiently to groups of mothers. Implementation will be gradual to allow for learning and corrective action.

support for the development and testing of strategies for reaching adolescent girls with nutrition counseling and weekly iron and folic acid supplementation; (iii) incentivize CHWs through the performance-based financing scheme; (iv) strengthen and/or establish home-based, early childhood development models of care that serve as platforms for enhanced infant and child feeding, hygiene and sanitation practices and early learning and stimulation (Box 3); (v) provide targeted support to vulnerable households with young children to improve access to WASH interventions (i.e. sanitary latrines, handwashing stations with soap, household water treatment and safe water storage); and (vi) strengthen multi-sectoral district planning, budgeting, coordination, supervision, and monitoring.

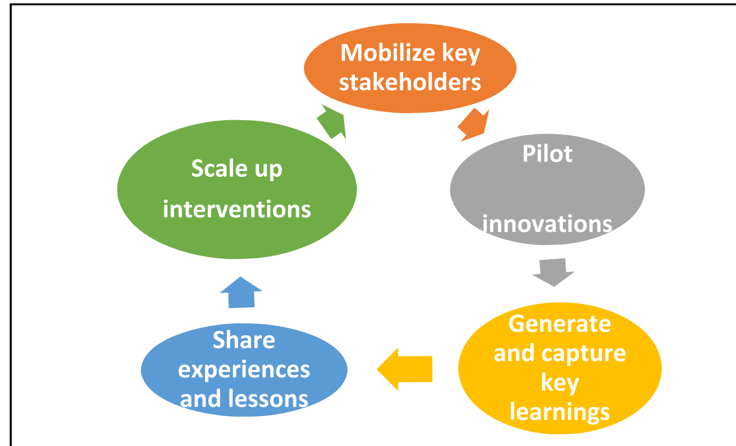
Component 2: High-impact Health and Nutrition Services (US$14.5 million equivalent)

44. To address key gaps in service delivery, health centers in the targeted districts will be supported and incentivized to improve utilization and coverage of an enhanced package of high-impact nutrition and health interventions. These interventions include those identified in the government's *Acceleration of Reduction of Stunting Strategy* which are in line with the 2008/2013 Lancet recommendations: (i) *height monitoring and growth promotion* and effective tracking of faltering children, early initiation and exclusive breast feeding, deworming, micronutrient supplementation (i.e. Vitamin A supplementation; therapeutic zinc supplementation with ORS; multiple micronutrient supplement powders)*;* and (ii) critical *nutrition and health interventions for women* (i.e. four antenatal care visits, four postnatal care, iron/folic acid supplementation, family planning, counseling on child care, complementary feeding and hygiene). Health facilities will be held accountable and incentivized to provide these interventions through the national PBF program. The project will also support health facilities with training, information technologies, and logistical support from the national level. To this end, support will be provided for the design and roll out of new information technologies (i.e. two-way messaging system using smart phones and tablets) and interactive systems for tracking every pregnant woman and child, ensuring prompt identification of growth faltering and effective response at the facility and household levels. *Performance Based Payments to the Health Centers (and also to CHWs under Component 1 of the Project) will be provided in accordance with the PBF Manual and a Supplemental PBF Manual for the Targeted Districts to be prepared by RBC that summarizes the proposed indicators; unit costs; weights; source of data; and verification/ counter verification procedures, along with a financial analysis of the impact of the incremental revenues for participating facilities and CHW cooperatives, prior to disbursing the PBF funds.*

Component 3: M&E and Project Management (US$5.5 million equivalent)

45. This component will support M&E, and project management. To this end, it will support the following activities: (i) conducting rigorous evaluations to draw timely lessons on what works, how much it costs, and how it can be scaled up; (ii) facilitating learning and knowledge sharing at both the community and district level; and (iii) supervising, coordinating and providing oversight. As participating districts scale up interventions, the project will support learning and knowledge sharing as depicted in Figure 2 and discussed in Box 4.

Figure 2: Learning and Knowledge Sharing



Box 4: ***Learning Agenda for Stunting Reduction Program***

Given that the proposed project is an integral part of the larger World Bank Program to address childhood stunting, a joint learning agenda is being developed. The learning agenda focuses on three key dimensions: (a) *convergence* between nutrition specific (health project) and nutrition sensitive interventions (social protection and agriculture operations); (b) *innovations* in behavior change communications; and (c) *performance-based financing* approach to stunting prevention. The goal is to: (i) mobilize and empower local stakeholders to assess the stunting situation in their districts; (ii) pilot innovations; (iii) take stock of experiences, practices and lessons learned through case studies, operational research and evaluations; (iv) share innovations and lessons through regular coordination meetings, newsletters, exchange visits, documentaries, and radio talk programs; and (v) take corrective action and scale up, replicate and/or generalize good practices. Key research questions to be addressed are summarized below.

***Convergence**:* One of the key goals of the joint learning agenda will be to understand the value added of the convergence of different interventions, targeting the same geographic areas, reaching the same households, and focusing on the 1,000 day window. While global evidence on the importance of well-coordinated investments is strong, much remains to be learned about which interventions work best in different contexts, which interventions are most cost effective, and what combination and or sequence of interventions have the greatest impact in terms of both reducing both poverty and stunting.

-*Social Protection*: In line with global evidence, the proposed conditional nutrition grants are expected to improve the utilization of health and nutrition services (e.g., height monitoring and growth promotion, four antenatal care visits, postnatal care visits, post-partum family planning) while the Expanded Public Works Program, home-based ECD model, is expected to improve parenting skills, infant, child feeding, hygiene and sanitation practices, and cognitive development.

-*WASH*: Given the importance of environmental health, the proposed WASH interventions are also expected to contribute to stunting prevention. While behavioral change communications will take place under both the social protection and health operations, the latter also includes improved access to latrines, handwashing stations, household water treatment and safe water storage, providing an opportunity to assess the relative contributions of both demand and supply side interventions.

-*Agriculture*: Considering the well documented potential impacts of agriculture sensitive interventions on food adequacy, the learning agenda also aims to explore the most efficient pathways by which agriculture interventions can impact nutrition. Given the focus of the agriculture project on both increasing production of nutritious food (i.e. through biofortification, kitchen gardens, small livestock) and improving incomes (i.e. income generating activities) this provides an opportunity to determine the relative impact of nutrition sensitive agriculture interventions combined with supply side health actions. This might also be an opportunity to meet the research gaps that the ongoing Rwanda Country Strategic Review for Food and Nutrition Security has identified. Specifically, on linkages between agricultural markets and nutrition, and linkages between nutrition and gender in agriculture.

Behavior Change Communications**:** Given the multitude of BCC interventions to be supported under the World Bank program (e.g. CHW interventions, interpersonal counseling with parents and caretakers, rural radio and talk shows, *umuganda* day campaigns, electronic messaging), this offers an opportunity to undertake qualitative research to assess the appropriateness and impact of these different channels and modalities for improving knowledge of stunting. Notable innovations include: new approaches to visualize child height growth at the community level, in the form of life-size drawings of a child mountain gorilla in which children can stand and see if they are reaching their height potential. The home based ECD model will offer an opportunity to assess the impact and efficiency of using group communication over home-based visits; and best mechanisms to deliver messages, and applying positive deviance methodologies in group settings.

Performance-based financing*:* The proposed application of PBF to address stunting offers a unique opportunity to ascertain the impact of incentive payments on the coverage and quality of a package of high-impact nutrition and health interventions. While many development partners in Rwanda support input financing, the application of PBF modalities focused on stunting is new. Building on a strong PBF national scheme that has been in effect since the early 2000s, this health project will support the introduction of a core set of nutrition indicators to incentivize both CHWs and health facility personnel and hold them responsible for the desired results under a supplemental PBF Manual for the 13 Targeted Districts. A quality score card will be developed and introduced to monitor progress and remunerate providers accordingly. An important part of the learning agenda will be to compare districts with the PBF scheme with those without the scheme.

E. Project Cost and Financing

46. The proposed total project cost of US$55.0 million is supported through Investment Project Financing over five years. The project will be co-financed by a US$20.0 million recipient-executed grant from the MDTF Scaling Up Nutrition to Achieve Scale, and US$10.0 million recipient executed grant through the GFF. The estimated project costs along with the sources of funding are provided in Table 1.

Table 1: Project Costs, by Component and Source of Funding

Project Components	Project cost	IDA Financing	Trust Funds MDTF	Trust Funds GFF
Component 1: Prevention of Stunting at Community and Household Levels				
-Communication Campaigns	**35.0**	**24.0**	**3.0**	**8.0**
-CHW Program and community-led	4.0	1.0	3.0	0.0
approaches	6.5	2.0	0.0	4.5
-Home-based ECD models	8.2	8.2	0.0	0.0
-WASH Interventions	4.5	4.5	0.0	0.0
-District multi-sectoral response	5.5	2.0	0.0	3.5
-Community PBF	6.3	6.3	0.0	0.0
Component 2: High-impact Health and Nutrition Services	**14.5**	0.0	**14.5**	**0.0**
-Supply Chain & Staff Training	11.0	0.0	11.0	0.0
-Facility PBF	3.5	0.0	3.5	0.0
Component 3: M&E, and Project Management	**5.5**	**1.0**	**2.5**	**2.0**
-M&E, Learning & Knowledge Sharing	4.5	0.0	2.5	2.0
-Project Management	1.0	1.0	0.0	0.0
Total Costs	**55.0**	**25.0**	**20.0**	**10.0**

F. Lessons Reflected in the Project Design

47. **The project design draws on best practices and innovative approaches from Rwanda and lessons learned from countries that have mounted successful programs to substantially reduce stunting**. Key lessons incorporated into the design are as follows:

48. **Strong government commitment combined with appropriate policies, and secure financing, are critical elements.** Countries that have mounted successful national stunting reduction programs have demonstrated how a combination of factors can achieve significant changes, including: (i) political commitment coupled with the adoption of clear and ambitious targets and evidence-based interventions; (ii) strong coordination between government ministries, health professionals and non-governmental organizations; (iii) broad societal participation; (iv) increased government spending; and (v) strategies focused on targeting the most vulnerable groups.[17] The proposed Rwanda program also benefits from a strong enabling environment with authorities putting in place all critical ingredients. The high-level political commitment to the elimination of stunting and investing in the Early Years is mobilizing local actors and re-energizing the national agenda. The involvement of the World Bank, in partnership with the MDTF and the GFF, will result in a substantial increase in financing targeted to high stunting districts

[17] Peru offers an example of a country that has put in place a strong enabling environment that covers all these critical dimensions. Marini, A., and Rokx, C. with Gallagher, P., *Standing Tall: Peru's Success in Overcoming its Stunting Crisis*, World Bank, 2017.

and needy families. The political will combined with secure financing will enable local stakeholders to assume greater responsibility for addressing childhood stunting.

49. **Adoption of a multi-sectoral approach that brings together all relevant sectors and includes an appropriate mix of supply and demand of services has proven essential to dealing with the underlying determinants of stunting**. Even though there is no blueprint for the package of interventions that result in the greatest reductions in stunting, with countries using different approaches, it is well recognized that involvement of a maximum number of sectors, and convergence of interventions in the same geographic areas will be important. The Government of Rwanda has adopted a national multi-sectoral strategy that aims to involve all critical sectors and all actors at the national, community and household levels. The updating of the national mapping of all government and donor-funded interventions will provide valuable information to enhance multi-sectoral programming. The World Bank Program offers an opportunity for a well-coordinated, harmonized approach to stunting reduction.

50. **Modern mass media campaigns and behavior change communications with appropriate cultural messages can potentially play an important role in making stunting no longer a silent killer.** Rwandese authorities recognize that a paradigm shift is needed to change the way people think about stunting. As was done for other public health problems (i.e. HIV/AIDS) in the previous decade, a similar state of the art mass media campaign about the causes and implications of stunting has now become a national priority. The media campaign will use multiple channels that are appropriate to the local context (i.e. rural radio, *umuganda* day campaigns). Building on the awareness raised, high quality interpersonal counseling that draws on locally appropriate behavior change strategies (e.g. positive deviance, peer support groups) and global lessons, will bring about the behavior change needed to prevent stunting.

51. **Strengthened incentive structures and agile information systems have proven to be additional important ingredients of successful programs in Rwanda and in other countries.** Rwanda has been a leader in Africa on performance based financing in the health sector.[18] Impact evaluations have shown the potential of financial incentives for both improving coverage and quality of key interventions.[19] The *imihigo* contracts between the President of the Republic and local district authorities have proven to be an additional effective mechanism for enhancing accountability and will now be used to address childhood stunting. The proposed inclusion of a comprehensive set of nutrition indicators in the national PBF program is expected to align resources with results.[20] Likewise, the proposed nutrition grants to be delivered through the social protection project will serve as an important demand side measure to the supply side interventions under this project. Efforts are also underway to review and revitalize information systems, introduce interactive technologies for enhanced tracking, monitoring and follow up vulnerable children, women and families, and ensure availability and use of timely data.

52. **Strategic planning and effective coordination combined with community based approaches have been identified as national priorities for stunting reduction.** The government aims to strengthen strategic planning and coordination through the recently appointed ECD Coordinator who will manage both nutrition and the national ECDP that will promote greater involvement of families and parents.

[18] Rusa, L, Schneidman, M., Fritsche, G., Musango, L., *Rwanda: Performance-Based Financing in the Public Sector*, Performance Incentives for Global Health: Potential and Pitfalls, Center for Global Development, 2009.

[19] Basinga, P., Gertler, PJ, Binagwaho, A., Soucat, A., Sturdy, J., Vermeersch, CM., *Effect on maternal and child health services in Rwanda of payment to primary health-care providers for performance: an impact evaluation*, Lancet, 2011.

[20] These proposed measures are like approaches used in Peru, where regional governments were provided monetary incentives to deliver high quality nutrition services.

Countries such as Senegal[21] and Ghana[22] have demonstrated the benefits of community-based approaches.

53. **Community health workers play a pivotal role in increasing awareness about stunting and in sensitizing caregivers**. To this end, it is important to ensure that the ratio of CHWs to households is appropriate, allowing for regular and timely visits. Global evidence and experience from Rwanda has shown the importance of high quality training, mentoring and supervision, with a focus on a respectful and supportive attitude of CHWs, ensuring that counselling is tailored to the circumstances of the household. Other key emerging lessons point to the importance of community engagement in the management of CHWs, such as recruitment, selection, collaborative supervision, integrated monitoring system, and provision of non-financial incentives. Innovative tools that help communities, households, and caregivers visualize children's growth progress is key to behavior change.

54. **A review of complementary feeding interventions in Rwanda and in other countries shows that education programs that highlight feeding children a diverse diet seem promising, along with other messages about timing, amounts, and hygienic food preparation methods**.[23] Two interventions that demonstrate positive results include providing key messages to mothers, fathers, grandmothers and other household members through peer support groups, and the positive deviance approach to behavior change.[24] The latter approach is a very direct way of meeting the goals of community-based participation and involves identifying positive practices that are unique to that context, such as Vietnamese mothers collecting shrimp for their children while working in rice paddies, or Ecuadorian women pre-masticating meat before giving it to their children.[25] In addition, both approaches involve supporting CHWs and other influencers from within the communities to act as role models, which can result in greater community engagement, thereby ensuring ownership of the process and outcomes and leading to sustainability of the intervention through the development of community support structures.

55. **International research on successful approaches to combatting child malnutrition, including those in Rwanda, indicates that holistic early childhood development programs[26] that enhance not only nutrition, but also health and early stimulation are more likely to support children reaching their full developmental potential.[27]** Integrating nutrition and ECD programs in the first two years of life has many advantages, including using the same personnel, the same platforms, and the same points of contact, thereby offering opportunities to engage in multiple complementary interventions with the same group

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[21] *A Decade of Support to Senegal's Nutrition Program*, World Bank, December 21, 2016.

[22] The Ghana program involved scale up of the Community Health Planning and investing in a cadre of nutritionists across all ten regions, with specific responsibilities to support sub-district level planning and delivery of nutrition specific interventions; and improving utilization of health and nutrition services.

[23] Dewey, K. G., and S. Abu-Afarwuah. 2008. "Systematic Review of the Efficacy and Effectiveness of Complementary Feeding Interventions in Developing Countries."

[24] The PD approach aims to understand what 'positive deviant families' are doing differently from the parents of malnourished children in the same community, and identify behaviors and practices from within that community that have a positive effect and trying to amplify their use to rehabilitate malnourished children; as well as provides community-based rehabilitation for moderate and severely malnourished children

[25] World Vision. 2010. "Nutrition Marketplace Profiling World Vision's Best Practices in Nutrition for Advocacy and Programme Stakeholders."

[26] ECD interventions comprise several stages of mental and physical growth as well as a variety of contexts such as homes, schools, and the community, and activities range from childcare to nutrition for pregnant mothers and young children to parent education.

[27] Engle et al. 2007. Strategies to avoid the loss of developmental potential in more than 200 million children in the developing world. Lancet, vol 369, January 20.

of children, mothers, and caregivers, resulting in cost-effectiveness and synergistic effects.[28] In the context of the proposed project, the home-based ECD program includes early stimulation as well as nutrition and health interventions that are critical to a child's physical and cognitive development. Specifically, the home-based ECD centers will provide opportunities for CHWs to engage in education and training of facilitators, mothers and caregivers on proper care, feeding, hygiene, and sanitation practices, as well as monitoring progress of these children, leading to increased demand for essential services and improved nutrition knowledge.

III. IMPLEMENTATION

A. Institutional and Implementation Arrangements

56. The institutional, implementation and coordination arrangements for the project will be largely anchored on existing platforms and seek to strengthen relevant capacities and systems for project implementation. Consistent with MoH's mandate, focusing on policy and strategy formulation roles and responsibilities, MoH will ensure oversight and coordination among health sector actors and development partners, including by being part of the Project Steering Committee (PSC). The Rwanda Biomedical Center (RBC), an independent agency will be responsible for overall project management and implementation, including through its Single Project Implementation Unit (SPIU). The RBC will actively engage with and seek strategic guidance from the National Early Childhood Development Program (NECDP) through the PSC to ensure promotion and use of best buy evidence-based interventions; development and refinement of nutrition guidelines, BCC materials and the communications strategy; provision of technical guidance to the targeted districts; and collaboration in conducting joint supervision. The Health Sector Working Group and related technical working groups which handle issues related to nutrition, will be kept informed about project activities, and consulted, as needed through the PSC. The NECDP, through the PSC, will ensure national multi-sectoral coordination across all ministries involved in the implementation of the nutrition policy, as well as activities carried out by development partners and civil society organizations.

57. *District-level Implementation.* At the local government level, district authorities will be responsible for providing oversight, ensuring effective coordination, and promoting multi-sectoral collaboration. The Vice Mayor for Social Affairs will provide oversight and ensure that the district planning directorate is actively involved. Likewise, district management will work closely with representatives of sectors, cells and villages, who are responsible for addressing chronic malnutrition at their respective levels. The DPEMs will serve as the main vehicle for guiding World Bank support for district level activities, using decentralized service delivery modalities to make local authorities accountable. The capacities of participating districts will be strengthened to improve planning, programming, budgeting and coordination.

58. Each targeted district will sign a District Agreement with the RBC for the activities and interventions to be supported under the project. The District Agreement will spell out the activities to be supported, eligible expenditures, technical reporting arrangements, and fiduciary and administrative arrangements for accounting for funds and seeking replenishment. It will include a detailed budget, timetable and key results. The District Agreement will also clarify the roles and responsibilities of key

[28] Maalouf-Manasseh, Z; Oot, L; Sethuraman, K. 2015. Giving Children the Best Start in Life: Integrating Nutrition and Early Childhood Development within the First 1,000 Days. Washington, DC: FHI 360/FANTA.

players at the district level with respect to the project. Activities eligible for financing include: (i) strengthening district capacity to plan, program and budget multi-sectoral activities focused on stunting reduction; (ii) conducting capacity building and training activities for district multi-sectoral teams; (iii) carrying out social mobilization and raising awareness of stunting; (iv) monitoring, tracking and reporting; and (v) supporting the roll out of the home-based ECD sites. Eligible expenditures will include: local training; hiring of additional temporary personnel; procurement of supplies and materials; engaging local consultants or service providers; and incremental operating costs.

59. Health centers in the targeted districts will be supported to carry out the core nutrition and health interventions proposed under the project and to mentor CHWs. Health centers will receive goods and equipment from the national level. Health personnel will benefit from local training to be organized by district or national authorities or will benefit from e-learning to minimize disruptions to service delivery. Health centers will benefit from PBF incentive payments for the delivery of a core package of health and nutrition interventions.

60. *Implementing Agency.* RBC is responsible for overall Project implementation and Management. The SPIU under the RBC will handle the following functions: (i) financial management, including flow of funds to different stakeholders; (ii) procurement of goods, and equipment to ensure economies of scale and efficiencies; (iii) securing consultant services; and (iv) oversight of safeguard provisions. The SPIU will elaborate a Project Implementation Manual (PIM) with guidance from the RBC and in close collaboration with the Maternal, Child and Community Health (MCCH) Division. The PIM will describe the project components; implementation modalities for each project component; fiduciary and social safeguard responsibilities and arrangements; and coordination mechanisms at different levels. The PIM will also include the health and nutrition indicators to be incorporated in the national PBF scheme in the targeted districts; proposed payment levels; and modalities for channeling funds to health centers and CHW cooperatives; and sample District Agreement to be signed between the RBC and each district. *To handle the additional workload from the project, the SPIU will recruit the following personnel: (i) Project Coordinator/Focal Point with experience in community nutrition; (ii) M&E Specialist; and (iii) two accountants and an internal auditor. In addition, a Social Behavioral Change Communications Specialist would be recruited to support the RBC/Rwanda Health Communications Center.*

61. *Coordination Arrangements.* A Project Steering Committee (PSC) will be established to provide strategic guidance on technical and operational issues. The PSC will review progress and take stock of lessons learned. With the chairpersonship of the National Coordinator of the NECDP, the PSC will be comprised of senior level officials from the Social Cluster Ministries (i.e., MINALOC, MoH, MIGEPROF, MIDIMAR, MINEDUC, MININFRA, MINAGRI); MINECOFIN and representatives of the target districts. Development partners can be invited to participate in the PSC to provide technical advice, and ensure synergies in investments. The PSC will meet every three months or more often as needed. The first meeting each year will approve the annual work plan for the project, and the associated budget. Subsequent meetings will monitor performance and budget execution. Resolutions and recommendations of the meetings will be communicated to implementers to ensure timely adoption and implementation of corrective actions.

B. Results Monitoring and Evaluation Arrangements

62. Performance indicators were selected to capture the overall objectives of the project, which are to improve nutrition, care, and hygiene practices and utilization of quality nutrition-specific interventions, that are expected to contribute to a reduction in stunting. The SPIU/RBC will consolidate technical and financial reports from target districts, health centers, and other stakeholders. Progress reports will include information on project activities, key indicators, beneficiaries, fiduciary and social safeguards. The PSC will review monitoring data to assess progress and propose remedial actions. The PIM will include details on the M&E arrangements, including roles and responsibilities, data sources and reporting frequency.

63. PDO level indicators are expected to be monitored through periodic population surveys in the target districts. Data for intermediate level indicators are expected to be available from existing data systems, including the Health Management Information System (HMIS), the CHW monthly reports, and facility supervision reports. Indicators to assess quality of and satisfaction with home-based ECD centers will be assessed through instruments developed with MIGEPROF and the newly created National ECD Program. The project will incorporate multiple strategies to ensure ongoing learning and evaluation, as discussed below.

64. *Baseline and end-line surveys:* Population surveys will be conducted in the participating districts to assess progress on key performance indicators (KPIs). The baseline survey will assess key nutrition behaviors, practices, and coverage levels of key services in the 13 targeted districts. A similar survey will be conducted at end-line. The World Bank team is discussing with other partners the possibility of co-financing population surveys (e.g. mini DHS, or Multiple Indicator Custer Survey, MICS) to ensure the availability of reliable district data and to minimize the cost. The other option under discussion is to include modules in existing nationally representative surveys, such as the CFSVA and the DHS. Either way, it will be important to ensure that target districts are oversampled for the indicators of interest.

65. *Quality of service delivery:* One of the key factors for the effectiveness of the proposed interventions is the quality with which they are delivered. In line with monitoring and ensuring that these interventions are delivered with high quality, this project will incorporate periodic assessments of service delivery quality at health facilities and ECD centers. On a quarterly basis, participating health facilities will be evaluated to assess the quality of services as part of the national PBF scheme with incentive payments weighted by the quality scores prior to channeling funds. Similarly, health sector personnel will assess the quality of the work performed by CHWs prior to channeling incentive payments to CHWs. In addition, other qualitative assessments and data quality audits may be performed, as deemed necessary.

66. *Process documentation and evaluation:* To support the learning under the project (Box 4) an operational research agenda will be developed. The learning agenda will focus on results and impact from: (i) convergence of nutrition specific and nutrition sensitive interventions; (ii) alternative behavior change communications; and (iii) performance based financing on quantity and quality of best buy interventions. Lessons learned from these evaluations will be shared among districts and will inform ongoing improvements in the design of the project and the national program. Furthermore, efforts will be undertaken to ensure that cells, health centers and districts collect and utilize routinely data to identify strategies and potential challenges that may enhance or limit the success of the interventions. This can

be accomplished through data dashboards that help facilities and districts visualize and track progress on selected indicators.

C. Sustainability

67. The prospects for sustainability of activities supported under the project are considered reasonably good, both from an institutional and financial perspective. Several sustainability enhancing measures augur well for the *institutional sustainability* of the proposed interventions. First, the project gives a major focus to training and capacity building at all levels, from parents, caregivers and CHWs at the community level to health staff, district personnel and national stakeholders. Strengthened decentralized capacity to oversee, monitor and coordinate multi-sectoral activities will bolster district institutional capacity. Enhanced knowledge and awareness of childhood stunting among mothers, caregivers, CHWs, health personnel and the public at large is expected to lead to behavior change that will go beyond the life of the project. Second, the design leverages and builds on existing institutional structures that have been in effect for several decades such as the decentralized structures, CHW platform, national PBF scheme, and an experienced implementation unit. Third, a core group of indicators will be included in the *imihigo* contracts between the President of the Republic and local authorities to strengthen accountability. Finally, the high-level political commitment will strengthen ownership of the stunting reduction agenda at all institutional levels.

68. Sustainability also hinges on ensuring adequate levels of domestic financing in the medium to long-term. To this end, two points are worth noting. First, while the health sector has been heavily dependent on donor financing, the government is making a concerted effort to allocate additional domestic financing and to improve the efficiency of public spending. The government proposes to use its own resources for the procurement of key nutrition commodities and to contribute to the startup of ECD centers at the village level. The World Bank will provide technical support to conduct expenditure reviews to explore additional ways to strengthen both technical and allocative efficiency. Second, to ensure financial sustainability, Rwandese authorities have agreed to absorb personnel recruited under the project, as has been done for other IDA-funded health projects in the past. This phased exist strategy ensures that target districts will assume responsibility for key incremental recurrent costs.

D. Role of Partners

69. Various development partners provide support for nutrition in Rwanda, including the United States Agency for International Development (USAID); United Nations Children's Fund (UNICEF) with funding from the Embassy of the Kingdom of the Netherlands (EKN), and the World Food Program (WFP). These development partners work through a wide range of non-governmental organizations and community-based organizations. The updating of the mapping of donor-funded programs found that virtually every district in Rwanda benefits from support from one or both major donors but there are still persistent gaps in core interventions and/or geographic coverage. The large number of partners supporting the government's program underscores the importance of enhanced coordination, particularly at the district level. To this end, one of the main priorities will be to strengthen the DPEMs, by making them effective mechanisms for coordinating all donor-funded activities at the district level. The World Bank project will support several key health system platforms (i.e. CHW, PBF, information systems) that will be complementary to activities funded by other development partners. With a total

portfolio of donor-funded projects for the next few years estimated at about US$95 million, the funds from the proposed project represent a substantial increase over and above the current funding level.

IV. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

70. There are several substantial risks to the project, including: (i) multi-sectoral nature of the stunting agenda which requires an inherently complex design; (ii) variable institutional and implementation capacity; and (iii) community-based approaches which rely primarily on volunteerism that raise concerns about financial sustainability. Based on the assessment of these important risks, the overall risk of the proposed project is therefore rated *Substantial*. The project can be characterized as high '*high risk, high reward*' with the potential to reinforce the recent positive trajectory in the reduction in stunting.

71. **Technical design.** The technical design promotes use of best buy interventions that are essential to dealing with the underlying determinants of stunting, including adoption of a multi-sectoral approach; a mix of supply and demand side interventions; and broad-based involvement of communities, parents, local leaders and national stakeholders. For this project to succeed, several ministries and districts will need to support well-coordinated interventions. Likewise, there will need to be close collaboration with other development partners, to minimize the risk of duplication and maximize synergies. Thus, the design is inherently complex. To partly mitigate this risk, the project leverages existing institutional structures, relies on well- established country systems and platforms that have benefited from World Bank support in the past, and will use the social clusters at the decentralized level to enhance involvement of critical sectors and promote coordination down to village level while the NECDP will ensure coordination at the national level.

72. **Institutional capacity.** While institutional capacity at the national level is relatively strong, capacity at district level is generally more constrained, especially for effective multi-sectoral action. A gap analysis has been undertaken to identify capacity needs at district level and consultations were conducted with key stakeholders during project preparation. Training of personnel and other capacity building measures will be supported to strengthen district capacity.

73. **Financial sustainability**. While many Rwandese initiatives and programs rely on volunteerism that works generally well, there are some concerns about financial sustainability. A case in point is the national CHW scheme which is internationally recognized for its success. With the additional workloads proposed under this project, there are risks of overload of these critical frontline workers who will be expected to play a key role in stunting prevention. To mitigate this risk and bolster their performance several key measures are planned, such as improved training, mentoring and supervision; incentive payments; and timely provision of critical commodities. The study on alternative CHW models will provide further guidance on financial sustainability.

V. APPRAISAL SUMMARY

A. Economic and Financial Analysis

74. Nutrition interventions contribute significantly to child survival and cognitive development, and to improvements in educational performance and economic growth. Nutrition interventions are among the most cost-effective interventions to enhance welfare and reduce poverty. The Copenhagen Consensus 2008,[29] ranked five nutrition interventions in the top ten among thirty proposals presented to answer the question on the best way to advance global welfare.[30] It is well-documented that the physical and cognitive development damage is largely irreversible after two years. A recent study conducted in Rwanda estimated that 22 percent of all child mortality and 13 percent of primary school repetitions are associated with undernutrition, with stunted children achieving an average of 1.1 fewer years in school. Total annual costs associated with undernutrition in Rwanda are estimated at 11.5 percent of the Gross Domestic Product (GDP), driven largely by lower productivity of adults performing manual activities.[31] These figures are comparable to global estimates of up to 11 percent losses in GDP in Africa and Asia attributable to undernutrition. A recent World Bank study found that the income elasticity for stunting reduction is lower (-0.20) in Africa, including in Rwanda, as compared with the rest of the world (-0.44).[32] This suggests that income growth alone will be insufficient to address stunting.

75. World Bank estimates suggest that with an investment of US$27 million per year over 10 years in a package of proven high-impact interventions, 183,000 fewer Rwandese children will be stunted, 28,000 more children under six months of age will be exclusively breastfed, and 1.5 million cases of anemia in women will be averted. Additional health system cost-savings would be realized because these interventions will reduce the incidence and severity of childhood illnesses such as diarrhea and pneumonia. Investing in this set of nutrition interventions will result in an estimated US$3.4 billion in economic benefits over the lifetime of beneficiaries. Additional benefits are anticipated from the convergence in investments proposed under the larger World Bank program.

76. Public investment in nutrition in Rwanda is justified based on both equity considerations and market failures. The burden of stunting in Rwanda falls disproportionately on poor households, rural residents and children of mothers with limited education levels. Rwandese children from the two lowest wealth quintiles have experienced only modest drops in stunting during the past 15 years (i.e. from 54 percent in 2000 to 47 percent in 2014/2015) with stunting rates remaining high in rural areas (41 percent). Public investment is critical to provide targeted support through both supply and demand side interventions. Public investment in nutrition in Rwanda is also justified on the grounds of market failure resulting from information asymmetries. Given the invisible nature of stunting in Rwanda, particularly among the poor and vulnerable, there is a strong case for public investment. Investments in communications and awareness raising have a large public good element with benefits accruing to society at large as improved nutrition reduces the impact of disease and improves national productivity.

77. The economic analysis conducted for the project finds a strong economic rationale for the proposed investment. The rate of stunting at baseline in target districts is above the national level. The

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[29] http://www.copenhagenconsensus.com/Projects/Copenhagen%20Consensus%202008-1.aspx. For further reading, see "Global Crises, Global Solutions", edited by Bjorn Lomborg. Cambridge; New York: Cambridge University Press, 2004.

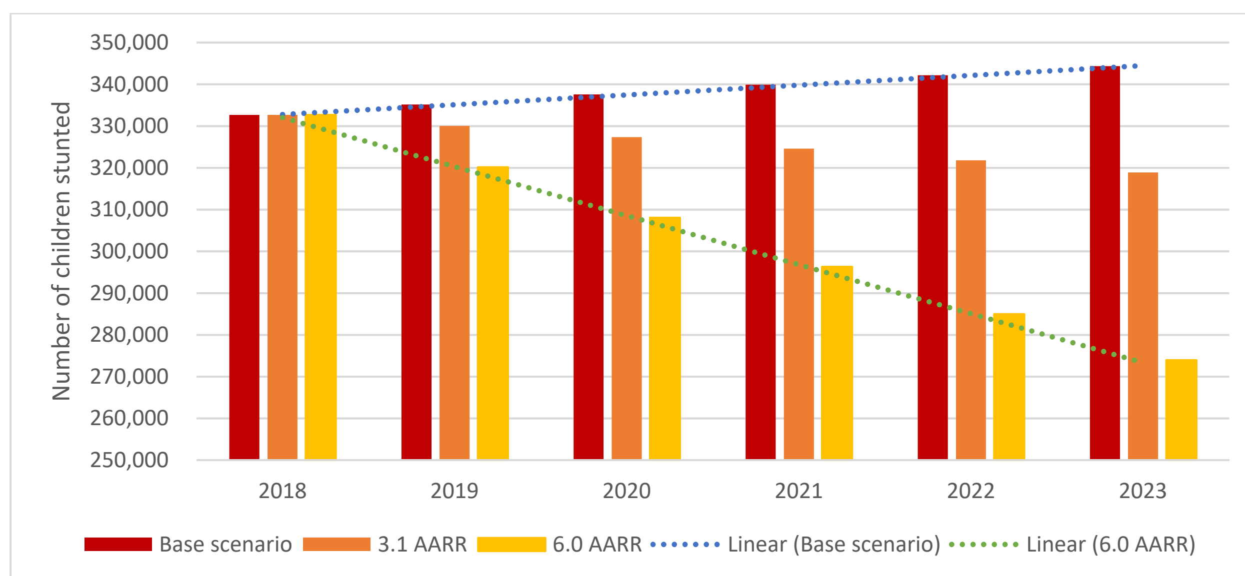
[30] It ranked micronutrient supplements for children including vitamin A and zinc supplementation first, micronutrient fortification including iron and iodine fortification third, bio-fortification fifth, de-worming and other nutrition programs at school sixth and community-based nutrition programs ninth.

[31] Government of Rwanda, UNECA, WFP. 2013. The social and economic impact of child undernutrition in Rwanda.

[32] Stunting Reduction in Sub-Saharan Africa, June 2017.

historical average annual rate of reduction (AARR) in stunting has been about 1.6 percent (2000-2015). This is significantly below the population growth rate of 2.5 percent, implying that the absolute number of stunted children continues to increase. The project aims to accelerate progress in the AARR. Two scenarios are presented: (i) a *highly optimistic scenario*, which involves an increase of the AARR to 6.0 percent, reflecting government's ambition and political will; and (ii) a *strong performance scenario* that involves sustaining the recent 3.1 percent AARR (2010-2015). In both cases, Rwanda will be on a positive trajectory to reduce stunting, and would attain rates of reduction comparable to the best performing countries. An increase in the rate of reduction is needed to bend the arc of history to reduce the absolute number of stunted children in the target districts. The baseline is compared to the two scenarios as depicted in Figure 3 below.

Figure 3: Comparing baseline to intervention scenarios in target districts



78. Two approaches to estimating the economic returns for averted cases of stunting were taken: (i) returns from increased farm wage productivity; and (ii) economic returns to increased years of schooling. For the former, foregone income in future farm wages was conservatively estimated to be 10 percent following the literature. As such, the investment at the highly optimistic 6.0 percent AARR would yield a net present value of US$176.7 million at a benefit-cost ratio of 5.3 and an internal rate of return of 15.5 percent. Taking the second scenario with an estimate of a 3.1 percent AARR would still generate a net present value of US$35.8 million with a benefit-cost ratio of 1.9, and an internal rate of return of 11.8 percent.

79. The alternative method of estimating the economic returns through increased years schooling yields a significantly higher return. A recent study associated stunting with a reduction of 1.1 years of schooling in Rwanda. (UNECA, WPF, 2013). A literature review of the average economic return of an additional year of schooling in Sub-Saharan Africa estimates the return per year to be 12.8 percent in wages. Applying this to the rural farm wage, the investment at the highly optimistic 6.0 percent AARR would yield a net present value of US$268.4 million at a benefit-cost ratio of 7.5 and internal rate of return of 16.9 percent. Using the 3.1 AARR, the investment would still yield a net present value of US$68.4 million

at a benefit-cost ratio of 2.7 and internal rate of return of 13.0 percent.[33] In these estimates attribution of the benefits to the intervention is adjusted to the intensity of other donor activity. In summary, the alternative scenario of estimating the economic returns through increased years of schooling yields even higher returns than the direct effect on labor productivity and reaffirms the case of a sound economic investment. It should be noted that these two methods provide robust estimates of what can be expected in terms of economic returns to the proposed investment.

80. This economic analysis closely follows the project's results chain from the cost of nutrition interventions to stunting outcomes directly. While net returns of preventing stunting alone are promising, this approach does not capture other benefits associated with the project, such as benefits accruing from exclusive breastfeeding, reduced anemia and iodine deficiency, or potentially premature death. The economic returns outlined above are thus likely to underestimate the true economic return of the investment. Furthermore, as the poorest population strata are most affected by stunting, the intervention is likely to have significant equity and shared prosperity implications. More specifically, it will directly impact the income generating capacity of the bottom 40 percent in Rwanda. Fiscal implications of the investment were estimated to be minimal baring a low to negligible risk to crowding out other related expenditures.

B. Technical

81. The proposed interventions to be funded under the project are in line with global evidence of what works and considers the specificities of the Rwanda context. In 2013, the Lancet identified ten effective interventions that would reduce the burden of stunting by one-fifth if all delivered at 90 percent coverage. Implementing multi-sectoral nutrition sensitive interventions that address the multidimensional causes of malnutrition simultaneously with nutrition specific interventions, is expected to reduce the remaining 80 percent. Reversal of stunting requires nutrition specific interventions that focus on improving both child and maternal health.[34] To this end, the project aims to scale up best buy nutrition specific interventions in 13 high stunting districts, targeting children under five (with a focus on those under two) and pregnant and lactating mothers. The selected districts will also benefit from key nutrition sensitive multi-sectoral actions, either through the project (i.e. water and sanitation) or through the broader World Bank program (i.e. social protection and agriculture), targeting the same geographic areas and vulnerable households.

82. It is well documented that prenatal care, with a focus on maternal nutritional counseling alongside health checkups, immunizations, and micronutrient supplements, is a prerequisite for any stunting intervention. Even if a child is born with a low birthweight or length, there is a compensatory period of up to two years of age when growth can catch up (Victoria et al. 2008). During the first six months after birth, exclusive breastfeeding is one of the most effective ways of reducing infant morbidity (which negatively affects growth) and mortality (Jones et al. 2003; WHO 2000). Therefore, some of the main interventions to be supported under the project through the CHW platform or through the PBF program include early

[33] To address the issue of attribution, districts with high, medium, low partner engagement were attributed 70, 80, or 90 percent of the stunting cases averted, respectively.

[34] Maternal stature and nutrition are important predictors of intrauterine growth retardation and size at birth (Ozaltin et al. 2010). Maternal birthweight not only affects the birthweight of the offspring (Ramakrishnan et al. 1999) but also extends to health later in life. For example, birthweight is inversely related with the risk of coronary heart disease and stroke (Barker and Clark 1997; Huxley et al. 2007).

initiation of breastfeeding, and regular growth promotion. For infants 7-24 months, complementary feeding, growth promotion, and micronutrient interventions (e.g., iron, vitamin A, iodine, and zinc supplementation) are critical.[35] These interventions have been found to be cost-effective.[36] Other interventions include deworming and administering anthelminthic to reduce the incidence of parasite and bacterial infections among pregnant women, infants, and children (Horton el al. 2008a, Horton et al. 2008b). Given the importance of water, sanitation and hygiene in the prevention of diarrheal morbidity and mortality, the project also includes an important focus on these underlying determinants of stunting. Esrey (1996) found that improvements in sanitation are associated with a 0.8 centimeter to a 1.9 centimeter increase in height. [37]

C. Financial Management

83. A financial management assessment of the RBC/SPIU and one of the targeted districts (i.e. Bugesera), including a health center, was undertaken. The assessment complied with the Financial Management Manual for World Bank-Financed Investment Projects (effective on March 1, 2010), and The World Bank Policy and Directive on Investment Project Financing. The objective of the financial management assessment was to determine whether the existing financial management arrangements: (i) are capable of correctly and completely recording all transactions and balances related to the project; (ii) facilitate the preparation of regular, accurate, reliable and timely financial statements; (iii) safeguard the project's assets; and (iv) are subject to auditing arrangements acceptable to the World Bank.

84. The arrangements for project oversight and accountability are considered acceptable and consist of management oversight (i.e. RBC/SPIU), internal oversight bodies (i.e. internal audit, audit committee), external oversight bodies (i.e. Office of the Auditor General, OAG) and Parliament which reviews the OAG's audit reports and approves the government's budget, including that of the project. Monthly financial reports will be prepared by the RBC/SPIU and submitted to MINECOFIN for review. Key risks identified are as follows: (i) staffing gap in financial management and internal audit to absorb the additional workload generated by the project; (ii) unreliable reporting and reconciliation at district, district hospital and health center levels; and (iii) inadequate and delayed implementation of the OAG recommendations and internal control weaknesses at district level resulting in adverse or qualified audit opinions at majority of districts.

85. Given the limited financing that will flow and be managed directly by participating districts, the financial management risk is considered *Moderate*. The proposed risk mitigating measures are as follows: (i) develop detailed financial management guidelines for the project as part of the PIM; (ii) recruit at the RBC/SPIU two additional accountants (i.e. one qualified accountant for the position of financial management specialist; and one accountant with a bachelor degree or Certified Accounting Technician

[35] Complementary feeding can increase height by one centimeter up to the age of three years (Bhutta et al. 2008). Zinc supplementation and vitamin A can reduce diarrhea, and iron is known to reduce anemia and improve cognitive ability (Caulfield et al. 2006).

[36] Shekar, M., Kakietek, J., Dayton Eberwein, J., & Walters, D. (2016). An Investment Framework for Nutrition. *Washington DC: The World Bank Group*.

[37] Similarly, ensuring access to clean water is critical to reduce infection from water-borne illnesses. Studies in Bangladesh, Guinea-Bissau, Ghana, and Peru demonstrate that the odds of stunting at the age of two rose by a factor of 1.05 with each diarrheal episode (Black et al. 2008). An intervention like hand washing with soap can reduce diarrhea for children under five by 42 to 46 percent (Fewtrell 2005; Waddington et al. 2009) and can increase newborn survival rates by up to 44 percent when used by birth attendants and mothers (Rhee et al. 2008).

diploma) and one additional internal auditor with terms of reference to be agreed with the World Bank, not later than three months after effectiveness; (iii) enroll the project in IFMIS not later than two months after the Financing Agreement and Grant Agreements are signed; and (iv) provide training and support to financial management staff, including at participating districts and health centers.

86. *Fund flow arrangements*: The proceeds of the financing (IDA and Trust Funds) will flow from the World Bank through the RBC/SPIU to beneficiaries. The disbursement from the World Bank (for IDA and TFs) to the pooled Designated Account (DA) will be IFR-based, covering six-month forecast of cash flow needs. The single-pooled designated account (DA) in US dollars will be opened by the RBC/SPIU at the National Bank of Rwanda. The signatories of the pooled DA will be communicated to the World Bank by the MINECOFIN. Payment modalities are as follows. First, for the PBF activities, payment of incentives will be made directly from the pooled DA managed by the RBC/SPIU to health centers and CHW cooperatives in the targeted districts, using the national modalities for verification and counter verification which have been reviewed and found adequate. Second, for other activities (not PBF related) implemented at the district level, to ensure timely disbursements to districts and implementers on the ground, RBC/SPIU will disburse funds directly to the districts in a separate project account in Rwf managed by districts, as per modalities stipulated in the District Agreements, which will include at a minimum an approved work plan prepared by districts and approved by the RBC. Fund flows to districts will be compliant with the provisions of the District Agreements to be submitted to the World Bank for approval to ensure that accountability, reporting and disbursement provisions are in line with World Bank-financed project requirements. Finally, for activities implemented directly at the RBC level, funds will be managed and disbursed by the RBC/SPIU to suppliers, consultants, firms, and service providers.

D. Procurement

87. Procurement for the proposed project will be carried out in accordance with the 'World Bank Procurement Regulations for Borrowers under Investment Project Financing', dated July 1, 2016, hereafter referred to as 'Procurement Regulations'. The project will be subject to the World Bank's Anticorruption Guidelines, dated July 1, 2016.

88. As per the requirement of the Procurement Regulations, a Project Procurement Strategy for Development (PPSD) has been developed that sets out the methods to be followed by the Borrower in the procurement of goods, consulting, and non-consulting services financed by the World Bank (Box 5). The Procurement Plan sets out the methods to be used in the procurement of goods, consulting and non-consulting services financed by the World Bank. The Procurement Plan will be updated annually, or as required, to reflect evolving needs and improvements in institutional capacity. The project will use Systematic Tracking of Exchanges in Procurement (STEP), a planning and tracking system that will provide data on procurement activities, establish benchmarks, monitor delays, and measure procurement performance.

89. **Procurement risk assessment**. A procurement capacity and risk assessment has been carried out by the World Bank of the RBC to review the organizational structure for implementing the project. The Procurement Risk Assessment and Management System (PRAMS) has been finalized. Based on the assessment and taking note of the roles and responsibilities of the agencies responsible for procurement, the procurement risk rating is '*Moderate*'.

90. The proposed project will be implemented by the RBC which has experience and a good track record in World Bank-financed procurement. RBC, through its SPIU, is currently managing 23 donor-funded projects with total financing of RWF90.6 billion (US$110 million equivalent) in FY17. [38]

Box 5: Summary of the PPSD

The project procurement profile comprises of procurement of goods, consultancy, and non-consultancy services. No civil works are planned. The framework type of contractual arrangement will be used to procure goods and materials like corrugated iron sheets and plastic doors for construction of toilets, equipment for home-based ECD and IEC materials. The project also envisages to recruit consultants for providing advisory services like development of innovative strategies, BCC communications, and operational research. After careful evaluation of various options for the procurement approach and contracting strategy, framework agreements would be the optimum selection arrangement for procurement of goods and supplies. The international or national market approach will be used based on the availability in the national market and volume. The RBC is the implementing agency for the project. It has prior experience in implementing World Bank-funded projects as well as donor-funded programs. The staff are familiar with World Bank procurement guidelines. They require orientation and basic training on the World Bank's new procurement framework. They may also require support in preparation of RFP for complex consultancy contracts. The mitigated risk is '*Moderate*'**.**

91. Suppliers of goods and services are available in sufficient number and qualifications. The average number of bidders for all categories is about ten. Average number of suppliers of goods is 15, contractors for works is ten and consultants is six. The most common procurement methods used are National Competitive Bidding (NCB) for goods and works and Quality and Cost-Based Selection (QCBS) for consultancy services. Bid prices are comparable to estimates in the procurement plans.

92. There are internal project auditors to oversee day to day transactions. External audits are conducted by the Office of Auditor General and the Rwanda Public Procurement Authority (RPPA) conducts annual assessments. The Office of Ombudsman also does random audits and investigations. Regarding implementation of procurement activities by district hospitals and non-governmental organizations (NGOs), using funds transferred from the RBC, there is a pool of five auditors in the RBC to conduct regular audits and verification, on procurement and financial management. Recent external audits of a limited number of donor-funded projects found delays in tender initiation, procurement processing and contract execution. There is an adequate complaint review and resolution mechanism in Rwanda. The National Independent Review Panel (NIRP) is responsible for reviewing procurement related complaints, in line with the national procurement law. [39]

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[38] About 86.8 percent (US$93M) of the total funds are disbursed through direct transfers to district hospitals and NGOs operating in the health sector, while 13.2 percent (US$14M) is spent at RBC/SPIU. Out of the 13.2 percent spent at SPIU/RBC level, 10.8 percent (equivalent to US$11.5M) is for procurement and the remaining 2.4 percent (equivalent to US$2.6M) is for operating costs. Construction of health facilities, and supply of drugs and medical equipment are common procurements managed by RBC/SPIU.

[39] Four complaints were received in FY17 and all were related to procurements undertaken using the e-Procurement system, and consisted of queries and clarifications on reasons for rejection. This feature is now provided in e-Procurement system through the ongoing system enhancement.

93. The RBC/SPIU has an organizational structure of eight staff. Currently, the RBC/SPIU is staffed with seven procurement staff including, six procurement specialists and one procurement assistant. The procurement unit coordinator has acquired senior procurement specialist grade. The existing procurement staff are assessed to be adequate, both in terms of numbers, qualifications and experience, to manage the workload at hand and the proposed new project. In general, the assessment revealed that the procurement performance track record of the RBC/SPIU is satisfactory. Nonetheless, the staff are not familiar with the new World Bank Procurement Framework and Procurement Regulations, hence there is need for training at the inception stage.

94. **Use of national procurement procedures.** All contracts following the national market approach shall follow the procedures set out in the Rwanda Public Procurement Law (Law No. 12 of 2007) as revised in 2013 (Law No. 5 of 2013). The Rwanda Public Procurement Authority (RPPA) governs purchase of works, goods, and services using public resources by the national and district government entities, sectors, health and education institutions and City of Kigali. The RPPA as a regulatory body sets out the rules and procedures of public procurement and provides a mechanism for enforcement of the law. The procurement function is decentralized to individual procuring entities. The RPPA has oversight and regulatory function, including undertaking procurement reviews and audits. There is a National Independent Review Panel (NIRP) independent of government, that deals with complaints received from bidders or consulting firms. The provisions of the procurement law are consistent with the World Bank Procurement Regulations Section V - Paragraph 5.4, National Procurement Procedures.

95. **Disclosure of procurement information.** The following documents shall be disclosed on the agency's website: (i) Procurement Plan, and updates; (ii) invitation for bids for goods for all contracts; (iii) Request for Expression of Interest for recruitment of consulting services; (iv) contract awards for goods, consulting and non-consulting services; (v) monthly financial and physical progress reports for all contracts; and (vi) reports on complaints received on a quarterly basis and actions taken. The following details shall also be published in the United Nations Development Business and on the World Bank's external website: (a) an invitation for bids for procurement of goods following open international market approaches; (b) Request for Expression of Interest for selection of consulting services following open international market approaches; and (c) contract award details of all procurement of goods and selection of consultants using open international market approaches.

96. **Fiduciary oversight by the World Bank.** The World Bank shall conduct prior reviews of contracts, in line with the prior review thresholds set in the PPSD/Procurement Plan. All contracts not covered under prior review by the World Bank shall be subject to post review during implementation support missions and/or special post review missions, including missions by consultants hired by the World Bank. In addition, the World Bank may conduct, at any time, independent procurement reviews of all contracts financed under the IDA credit.

97. **Contract management.** Currently, high-risk and high-value procurements have not been identified for increased contract management support. However, if such contracts are identified during implementation, the agencies will develop KPIs for such identified contracts and the KPIs will be monitored during actual execution of contracts. The World Bank team will provide additional due diligence and will

conduct independent reviews of the contract performance of such identified procurements. A fully staffed SPIU will be responsible for overall project/contract management.

E. Social (including Safeguards)

98. Successful implementation of the project interventions and activities is expected to have positive impacts on vulnerable children and pregnant and lactating women, who are the main beneficiaries of the project. No major negative social safeguard impacts are expected. The RBC team organized public and stakeholder consultations in September/October 2017 to collect views and concerns with respect to the project design and discuss proposals to remedy potential adverse impacts. Participants were briefed on the scope and content of the project, and local authorities, CHWs, and opinion leaders in a few targeted districts were given the opportunity to share their insights. Most stakeholders raised concerns with respect to the challenge of changing the "*mindset on stunting*", challenges of families with many children who are at high risk of stunting, lack of regular growth monitoring and health screening, family conflict and polygamy, difficulties of health personnel to conduct visits at community and household level, and the absence of nutritionists at the health center level. Among the key recommendations were the need to strengthen outreach activities to reach families and children who do not attend health facilities regularly, and support and reinforce village-level activities, such as kitchen gardens and parent evenings.

99. *Citizen Engagement*: The World Bank mission noted that the project offers numerous opportunities for citizen engagement, such as: (i) community sensitization/mobilization and awareness campaigns; (ii) community outreach activities; (iii) community dialogues; (iv) district study tours; (v) radio programs; and (vi) home-based ECD centers. To further enhance citizen participation, the RBC/MoH team proposes to use platforms available at decentralized level to enable effective citizen participation. These include community meetings during *umuganda*, and other open days organized at district level to facilitate access to information. Beneficiary feedback on services and activities will be annually collected through an independent survey of beneficiaries using score cards. The Results Framework includes the specific citizen engagement indicator to be monitored and tracked during implementation.

F. Environment (including Safeguards)

100. The proposed project will boost the delivery of high impact health and nutrition interventions at health centers, which is likely to generate incremental health care waste, such as sharps or infectious waste. It may adversely affect the environment and local populations if not managed appropriately. It is anticipated that the incremental waste (i.e. medical and general) attributed to the project activities will be adequately managed within the existing waste management mechanisms of the project-supported health centers.

101. There is no construction or other civil works envisaged under the project. The project is thus not expected to have long term significant negative environmental impacts. Hence, the project has been assessed as *Category B* (partial assessment) under the World Bank's OP 4.01, Environmental Assessment, given the location specific and manageable nature of the potential environmental impacts. To this end, a Medical Waste Management Plan (MWMP) has been prepared by the government and submitted to the World Bank.

102. The MWMP aims to support the Government of Rwanda to prevent and/or mitigate the negative effects of increased generation of medical waste on human health and the environment due to the project activities. The plan proposes measures to prevent the spread of infection and reduce the exposure of health workers, patients and the public to the risks from medical waste. The plan is to be used by all project implementation entities to manage medical waste associated with project activities. These entities will have appropriate procedures and capacities in place to manage the medical waste. The MWMP: (i) outlines the current medical waste facilities and practices in Rwanda; (ii) provides an overview of the existing policies and laws guiding the management of waste generated by healthcare activities; (iii) discusses the potential environmental and social impacts of the project and proposes mitigation measures; and (iv) summarizes institutional and implementation arrangements, and the capacity building plan with its associated costs. The MWMP was disclosed at the World Bank Infoshop and in Rwanda, on December 1, 2017, and in a local newspaper on December 7, 2017. A safeguards focal point from the MoH has been appointed to coordinate the implementation of the MWMP.

G. World Bank Grievance Redress

103. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit *http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service*. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VI. RESULTS FRAMEWORK

Project Development Objective(s): To contribute to the reduction in the stunting rate among children under five, with a focus on those under two years of age, in the targeted districts

Results Indicators*		PBF**	CRI ***	Unit	Baseline [40]	Yearly Cumulative Targets (Optional)				End Targets
						Y1	Y2	**Y3**	**Y4**	**Y5**
PDO Indicators by Sub-objective /Outcome*										
	Indicator 1a: Percentage of children under 5 years with height-for-age z-score below -2 standard deviations			Percentage	43.6	41.0	38.5	36.2	34.0	32.0
	Indicator 1b: Percentage of children under 2 years with height-for-age z-score below -2 standard deviations			Percentage	37.1	34.9	32.8	30.8	29.0	27.2
	Indicator 2: Percentage of children 6-23 months old who are fed a diverse diet			Percentage	22.9	27.3	31.7	36.1	40.5	50
	Indicator 3: Percentage of women who attended 4 or more ANC visits during their most recent pregnancy			Percentage	41	43	46	49	52	55%

[40] Baseline for stunting prevalence was projected to 2018 based on the observed trend in rates of reduction in the target districts from the 2010 and 2015 DHS. Other baseline values come from the DHS or HMIS data aggregated for the 13 intervention districts, when available. When data were not readily available for the 13 districts, national values were used.

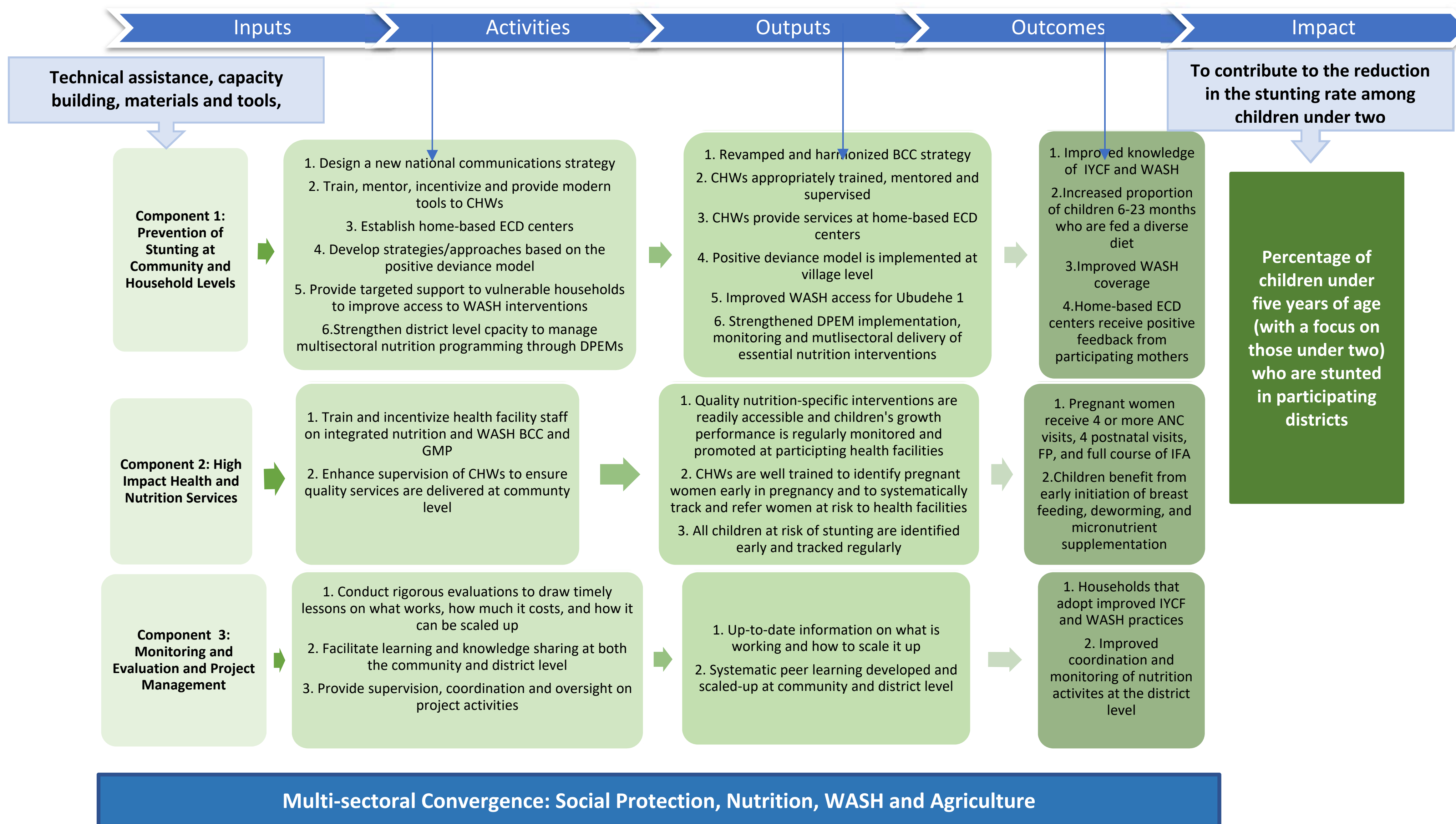
	Indicator 4: Number of beneficiaries of project interventions		√							
	Indicator 4a: Number of children under 5 were beneficiaries of project interventions		√	Number	0					560,000
	Indicator 4b: Number of women of reproductive age (including pregnant and lactating women) who were beneficiaries of project interventions		√	Number	0					1,100,00 0
Intermediate Results Indicators										
Component 1: Prevention of Stunting at Community and Household Levels	**IRI 1**: Percentage of children at risk of stunting identified at the health center receiving follow up visits by CHWs	√		Percentage	0	15	30	45	60	75
	IRI 2: Percentage of home-based ECD centers with satisfactory scores on quality score card			Percentage	N/A	16	32	48	64	80
	IRI 3: Number of parenting groups created and functional (positive deviance)			Number	0					TBD (depend ed on number of ECDs supporte d)
	IRI 4: % of CHWs who received a quarterly	√		Percentage	40	48	56	64	72	80

	supportive supervision visit from HC									
	IRI 5: Percentage of pregnant women who attended the first ANC visit during the first trimester	√		Percentage	56	60	64	68	72	75
	IRI 7: Percentage of pregnant women with anemia			Percentage	21.9	21	20	18	17	15
	IRI 7: Percentage of participants at CHW education sessions surveyed who demonstrate knowledge of proper care, feeding, and WASH practices			Percentage	N/A	10	20	30	40	50
	IRI 8: Percentage of children 6-23 months old receiving micronutrient powders			Percentage	N/A	18	36	54	72	90
	IRI 9: Percentage of children under two with diarrhea treated with ORS and zinc within 24 hours or referred to health facility			Percentage	N/A	10	20	30	40	50
	IRI 10: Number of Ubudehe 1 households with improved latrines (from project interventions)			Number	0	14,000	21,000	27,000	32,000	37,000
	IRI 11: Number of districts with satisfactory ratings on the DPEM			Number	N/A	3	7	13	13	13

	activity scorecard (to be developed)									
Component 2: High Impact Health and Nutrition Services	**IRI 12:** Percentage of children under 5 with height correctly measured and recorded at health facility	√		Percentage	N/A	15	30	45	60	75
	IRI 13: Percentage of health facilities with no stock out of Zinc for diarrhea treatment	√		Percentage	N/A	20	40	60	80	100
	IRI 14: Percentage of women 15-49 who are new users of modern contraceptives	√		Percentage	N/A	12	24	36	48	60
Component 3: M&E and Project Management	**IRI 15:** Percentage of participating health facilities that receive satisfactory rating from women and caregivers whose children received nutrition services (***Citizen Engagement indicator***)			Percentage	N/A	18	36	54	72	90
	IRI 16: Number of peer learning events conducted (within and between districts and sectors)			Number	N/A	5	10	15	20	25

* Organize PDO indicators by Sub-objective (Outcome) and intermediate results indicators by component (for IPF) or results areas (for PforR).
**Performance Based Financing.
*** Corporate Results Indicators.

ANNEX I: Expected Results Chain



ANNEX II: World Bank Program

Figure 1: Scale, Scope & Financing for Rwanda Stunting Reduction Program

Project	Scope	Coverage	Available financing
Social Protection	• New gender & child sensitive public works, including informal child care models • National/community parenting training • Cash transfers nutritionally vulnerable households	• National, w/emphasis on 270 sectors with high poverty • Targeting aligned w/HNP project geographically, on vulnerable household,& within first 1,000 days	• 80M$ IDA +$6M GOR for social pensions + $10M from Power of Nutrition + $5M GFF
HNP	• Refocus attention on stunting prevention • Support high-impact best buy interventions	• National level mass media campaigns • Targeted support to 13 high stunting districts	• $25M IDA + $20M from Power of Nutrition + $10M GFF
Agriculture	• Focus on national-level food security; w/household level food security pilots	• Coverage in 10 districts (5 overlap w/HNP) w/ household food security pilots in a few districts	• $27M GAFSP TF

FIGURE 2: RWANDA STUNTING REDUCTION PROGRAM: THEORY OF CHANGE

Impact

Reduced Stunting

Outcomes

- Increased coverage & quality of health and nutrition interventions; and child caring, feeding and hygiene practices
- Enhanced access to food and health/nutrition services through cash transfers and other nutrition-sensitive agriculture interventions

Inputs/ Interventions

Health/Nutrition PROJECT

Social Protection (including CCTs) PROJECT

Agriculture PROJECT

WATER & SANITATION
BEHAVIOUR CAMPAIGNS

Guiding Principles

- ✓ Focus on high stunting districts & vulnerable districts/households
- ✓ Promote use of a complementary set of interventions
- ✓ Leverage successful programs (VUP, CHW, PBF)
- ✓ Develop a "common learning agenda"

FIGURE 3: BANK PROGRAM—PROMOTING CONVERGENCE

Legend
Stunting Prevention and Reduction Project district
Global Agriculture and Food Security Project district
Expanded Public Works sector
Aquatic Land

Rwanda