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INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A
PROPOSED GRANT

IN THE AMOUNT OF SDR 28.3 MILLION
(US\$40.0 MILLION EQUIVALENT)

ON A
PROPOSED GRANT

IN THE AMOUNT OF US\$10.0 MILLION
FROM THE GLOBAL FINANCING FACILITY IN SUPPORT OF EVERY WOMAN EVERY CHILD
MULTI-DONOR TRUST FUND

AND ON A
PROPOSED GRANT

IN THE AMOUNT OF US\$10.0 MILLION
FROM THE GLOBAL FINANCING FACILITY FOR WOMEN, CHILDREN AND ADOLESCENTS
MULTI-DONOR TRUST FUND

TO THE
REPUBLIC OF SIERRA LEONE

FOR A
QUALITY ESSENTIAL HEALTH SERVICES AND SYSTEMS SUPPORT PROJECT

November 16, 2021

Health, Nutrition And Population Global Practice
Western and Central Africa Region

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CURRENCY EQUIVALENTS

Exchange Rate Effective October 31, 2021

Currency Unit = Sierra Leonean
Leone (SLL)

US\$1 = SDR 0.70652404

FISCAL YEAR

January 1 - December 31

Regional Vice President: Ousmane Diagana

Country Director: Pierre Frank Laporte

Regional Director: Dena Ringold

Practice Manager: Gaston Sorgho

Task Team Leader: Kofi Amponsah

ABBREVIATIONS AND ACRONYMS

ACC	Anti-Corruption Commission
ANC	Antenatal Care
ASSL	Audit Service Sierra Leone
AYFC	Adolescent and Youth Friendly Clinics
AWP	Annual Work Plan
BD	Bidding Document
BEmONC	Basic Emergency Obstetric and Neonatal Care
BMI	Body Mass Index
CBWTF	Centralized Bio-medical Waste Treatment Facility
CDC	Center for Disease Control
CE	Citizen Engagement
CEA	Cost-effectiveness Analysis
CEmONC	Comprehensive Emergency Obstetric and Neonatal Care
CEPRP	COVID-19 Emergency Preparedness and Response Project
CERC	Contingent Emergency Response Component
CHC	Community Health Center
CHP	Community Health Post
CHVA	Climate and Health Vulnerability Assessment
CHW	Community Health Worker
CMO	Chief Medical Officer
CPF	Country Partnership Framework
CRPD	Company Risk Profile Database
CSO	Civil Society Organization
DA	Designated Account
DALY	Disability-adjusted Life Years
DC	District Council
DFIL	Disbursement and Financial Information Letter
DHIS	District Health Information Software
DHMT	District Health Management Team
DMO	District Medical Officer
DP	Development Partner
DPPI	Directorate of Policy Planning and Information
E&S	Environmental and Social
EERP	Ebola Emergency Response Project
EHS	Essential Health Services
EMC	Executive Management Committee
EMR	Electronic Medical Record
EOC	Emergency Operation Center
EPI	Expanded Program for Immunization
ERP	Enterprise Resource Planning
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESRC	Environmental and Social Risk Classification

ESS	Environmental and Social Standards
FCDO	Foreign, Commonwealth and Development Office
FGM	Female Genital Mutilation
FM	Financial Management
GAVI	Global Alliance for Vaccination and Immunization
GBV	Gender-based Violence
GDP	Gross Domestic Product
GF	Global Fund
GFF	Global Financing Facility
GHG	Greenhouse Gas
GII	Gender Inequality Index
GNI	Gross National Income
GoSL	Government of Sierra Leone
GP	Global Practice
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
HCI	Human Capital Index
HDI	Human Development Index
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
HMIS	Health Management Information System
HNP	Health, Nutrition, and Population
HRH	Human Resource for Health
HSDSSP	Health Service Delivery and System Support Project
HSS	Health Systems Strengthening
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion and Results Report
ICT	Information and Communications Technology
IDA	International Development Association
IFB	Invitation for bid
IFR	Interim Financing Reports
IHPAU	Integrated Health Project Administration Unit
IP	Implementing Partner
IPC	Infection Prevention Control
IPF	Investment Project Financing
IPR	Independent Post Review
IRCBP	Institutional Reform and Capacity Building Project
ISA	International Standard on Auditing
IsDB	Islamic Development Bank
LIC	Low-income Country
LMP	Labor Management Procedure
M&E	Monitoring and Evaluation
MAF	Ministry of Agriculture and Forestry
MAM	Moderate Acute Malnutrition
MCHP	Maternal and Child Health Post
MEOWS	Maternal Early Obstetric Warning Sign
MICS	Multiple Indicator Cluster Survey

MMR	Maternal Mortality Ratio
MoHS	Ministry of Health and Sanitation
MSG	Mothers Support Group
MSCS	Makeni School of Clinical Sciences
MUAC	Mid-Upper Arm Circumference
NaCSA	National Commission for Social Action
NCD	Non-communicable Disease
NDP	National Development Plan
NEMS	National Emergency Medical Services
NHSP	National Health and Sanitation Policy
NHSSP	National Health Sector Strategic Plan
NGO	Nongovernmental Organization
NMSA	National Medical Supplies Agency
NPHA	National Public Health Agency
OB/GYN	Obstetrics and Gynecology
OHS	Occupational Health and Safety
OP/BP	World Bank Operational Policy/Bank Procedure
OPCS	World Bank's Operations Policy and Country Services
OOP	Household Out-of-pocket
PDO	Project Development Objective
PEFA	Public Expenditure Financial Accountability
PER	Public Expenditure Review
PFM	Public Financial Management
PHC	Primary Health Care
PHU	Peripheral Health Unit
PIH	Partners in Health
PIM	Project Implementation Manual
PHIT	Rwanda Population Health Implementation and Training
PMF	Performance Measurement Framework
PPD	Private Partnership Dialogue
PPP	Public-Private Partnership
PPR	Procurement Post Review
PPSD	Project Procurement Strategy for Development
PoE	Point of Entry
PSC	Project Steering Committee
QEHSSSP	Quality Essential Health Services and Systems Support Project
REDISSE	Regional Disease Surveillance Systems Enhancement
RMNCAH-N	Reproductive, Maternal, Newborn, Child and Adolescent Health and Nutrition
RMET	Resource Mapping and Expenditure Tracking
RUSLP	Resilient Urban Sierra Leone Project
RUT	Ready-to-use Therapeutic Foods
SAM	Severe Acute Malnutrition
SARA	Service Availability and Readiness Assessment
SCD	Systematic Country Diagnostic
SCS	School of Clinical Science
SDG	Sustainable Development Goal

SDI	Service Delivery Indicator
SDR	Special Drawing Rights
SEA/SH	Sexual Exploitation and Abuse and Sexual Harassment
SECHN	State Enrolled Community Health Nurse
SEP	Stakeholder Engagement Plan
SLeSHI	Sierra Leone Social Health Insurance
SLDHS	Sierra Leone Demographic Health Survey
SLMICS	Sierra Leone Multiple Indicator Cluster Survey
SOPs	Standard Operating Procedures
SORT	Systematic Operations Risk-Rating Tools
SPD	Standard Procurement Documents
SRN	State Registered Nurse
SSA	Sub-Saharan Africa
STEP	Systematic Tracking of Exchanges in Procurement
TB	Tuberculosis
ToR	Terms of Reference
TTL	Task Team Leader
UHC	Universal Health Coverage
UNAIDS	Joint United Nations Programme on AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VfM	Value for Money
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization



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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Sierra Leone	Sierra Leone - Quality Essential Health Services and Systems Support Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P172102	Investment Project Financing	High

Financing & Implementation Modalities

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input checked="" type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
09-Dec-2021	31-Dec-2027

Bank/IFC Collaboration

No

Proposed Development Objective(s)

The PDO is to increase utilization and improve quality of maternal and child health services in the selected areas.

Components

Component Name	Cost (US\$, millions)
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Component 1: Improving Quality, Efficiency, and Effectiveness of Reproductive, Maternal, Newborn, Child Health and Nutrition Services	31.28
Component 2: Strengthening National Level Systems	15.40
Component 3: Project Management and Monitoring and Evaluation	10.02
Component 4: Contingent Emergency Response project (CERC)	0.00

Organizations

Borrower:	Republic of Sierra Leone
Implementing Agency:	Integrated Health Project Administration Unit (IHPAU) Partners in Health (PIH)

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	60.00
Total Financing	60.00
of which IBRD/IDA	40.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	40.00
IDA Grant	40.00

Non-World Bank Group Financing

Trust Funds	20.00
Global Financing Facility	20.00

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
Sierra Leone	0.00	40.00	0.00	40.00
National PBA	0.00	40.00	0.00	40.00



Total	0.00	40.00	0.00	40.00			
Expected Disbursements (in US\$, Millions)							
WB Fiscal Year	2022	2023	2024	2025	2026	2027	2028
Annual	0.93	3.69	4.14	6.63	7.49	8.10	9.02
Cumulative	0.93	4.62	8.76	15.39	22.88	30.98	40.00

INSTITUTIONAL DATA

Practice Area (Lead)

Health, Nutrition & Population

Contributing Practice Areas

Energy & Extractives, Education

Climate Change and Disaster Screening

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

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	● High
6. Fiduciary	● Substantial
7. Environment and Social	● High
8. Stakeholders	● Moderate
9. Other	● Substantial
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

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description

Not later than twelve (12) months after the Effective Date, the Recipient shall establish a Unified Financial



Management and Reporting Portal within the IHPAU in form and substance acceptable to the Association.

Sections and Description

Forty-five (45) days after the Effective Date, the Recipient shall adopt an appropriate accounting software for use in Project accounting in form and substance satisfactory to the Association.

Sections and Description

Recipient shall cause the Project Implementing Entity to by no later than one (1) month after the Effective Date prepare and furnish to the Association, the first work plan and budget for Project (Annual Work Plan).

Sections and Description

Submit the GBV Action Plan to the Association within two months of Board approval.

Conditions

Type	Financing source	Description
Effectiveness	Trust Funds	The GFF Grant Agreement has 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.
Effectiveness	IBRD/IDA	A Cooperation Agreement, acceptable to the Association, shall have been duly executed and delivered on behalf of the Recipient and the Project Implementing Entity, and shall have become effective and binding upon the parties in accordance with its terms.
Effectiveness	IBRD/IDA	The Recipient has prepared and adopted a Project Implementation Manual in form and substance satisfactory to the Association.
Effectiveness	IBRD/IDA	The Recipient has recruited an internal auditor and a procurement officer, both with qualifications, experience, and under terms of reference satisfactory to the Association.
Effectiveness	IBRD/IDA	The Recipient has caused the Project Implementing Entity to recruit a senior grant specialist, a finance officer and a procurement officer for Part 1(a) of the Project, all with qualifications, experience, and under terms of reference satisfactory to the Association.
Disbursement	Trust Funds, IBRD/IDA	For payments under Category (3) unless the Recipient has conducted a feasibility study to determine the type of technology, the prevailing baseline conditions, risk levels associated with the



		locations, and management and handling of the CBWTF; and the findings of said study are acceptable to the Association.
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I. STRATEGIC CONTEXT

A. Country Context

1. **Sierra Leone has recorded solid economic growth since the end of the Ebola epidemic in 2016.** Before the COVID-19 pandemic, gross domestic product (GDP) growth was projected to reach 5.4 percent in 2019—the highest growth since 2016. Sierra Leone’s fiscal deficit had declined from 5.7 percent of GDP in 2018 to 2.9 percent in 2019. The fiscal stance was generally contractionary, with a wide range of measures to raise domestic revenue and rationalize expenditures. However, due to an expansionary fiscal outlook to address the impact of the Coronavirus disease (COVID-19), the budget deficit increased from 3.1 percent of GDP in 2019 to 5.8 percent in 2020. The pandemic has generated debt vulnerabilities as public debt increased by 7.3 percentage points relative to the pre-COVID-19 debt forecast, reaching 76.6 percent of GDP in 2020. The current account deficit narrowed from 22.3 percent of GDP in 2019 to 16.7 percent in 2020 reflecting higher official transfers to help the country cope with the pandemic. Annual average inflation rate has been trending down, from 14.8 percent in 2019 to 13.4 percent in 2020 supported by favorable trends in global and fuel prices^[1].

2. **Economic performance has been undermined by the COVID-19 pandemic.** The government’s commitment to preserving fiscal and macroeconomic stability has been put on hold since the onset of the pandemic in March 2020. The pandemic has led to a dramatic fall of tax revenues, making it difficult for the government to mitigate the fiscal pressures from increased spending, including on health. On the revenue side, the tax capacity has been set back by the COVID-19-related economic contraction, especially in the services sector. As a result, in 2020 total expenditure increased by 2.8 percent of GDP, whereas domestic revenue declined by 2.6 percent of GDP. These factors have constrained poverty reduction, with 56.8 percent of Sierra Leone’s population still living below the poverty line.

3. **Sierra Leone continues to face significant human development challenges amid several crises including the COVID-19 pandemic and climate change.** The country ranks 182nd out of 189 countries on the 2020 United Nation’s Human Development Index (HDI), with an HDI of 0.452 – lower than the sub-Saharan Africa (SSA) average (0.547). Sierra Leone scores 0.36 on the 2020 World Bank Human Capital Index (HCI), indicating that a child born in Sierra Leone today will only achieve 36.0 percent of his/her productive potential if key health and education outcomes remain the same. Moreover, according to the Notre Dame Global Adaptation Initiative (ND-GAIN), Sierra Leone is the 17th most vulnerable country to climate change and the 50th least ready country to adapt to climate change in the world.¹

B. Sectoral and Institutional Context

4. **While Sierra Leone has made progress on some key health indicators, health outcomes show mixed results.** Health outcomes have seen improvement overall, but a comparison with peer countries shows equal or slightly worse trends. While life expectancy at birth increased from 39 years to 54 years between 1990 and 2017, it remains the fourth lowest globally. The country’s health status metrics on maternal and child health and nutrition are lower than low-income countries (LICs), as well as regional and subregional averages (Table 1). While Sierra Leone’s level of public health expenditures is about the same as that of comparator countries, it has one

^[1] Sierra Leone IMF-World Bank staff estimate, Ministry of Finance, 2021.

¹University of Notre Dame. 2019.Sierra Leone ND-GAIN profile and index ranking. Retrieved at: <https://gain-new.crc.nd.edu/country/sierra-leone>



of the highest maternal mortality ratios (MMRs) in the world, at 717 maternal deaths per 100,000 live births. High risk of maternal death is found to be associated with a high prevalence of teenage pregnancy. Forty-seven percent of maternal deaths among women ages 15–19 years old occur due to complications during pregnancy or childbirth as well as unsafe abortions. Adolescent pregnancy is also closely related to high child mortality. The country recorded an under-five mortality rate of 122 per 1,000 live births, an infant mortality rate of 75 per 1,000 live births, and a neonatal mortality rate of 31 per 1,000 live births (SLDHS 2019). The mortality rate among children under five years old whose mothers are less than 20 years old is 1.2 times higher than those whose mothers are 20 years or older. Further, malaria has been the leading cause of death among the population, with 8,324 disability-adjusted life years (DALY). Once infected, pregnant women risk anemia, premature delivery, and stillbirth. Although the stunting rate for children under-five has declined per the recently published Sierra Leone Multiple Indicator Cluster Survey (MICS), it remains high at 26.4 percent² (Statistics Sierra Leone 2018).

Table 1: Comparison of Mortality and Stunting Rates in Sierra Leone

Indicator	Sierra Leone	West Africa Sub-region Average	SSA Average	LIC Average
Neonatal mortality per 1,000 live births	20 ^a	28	28	26
Infant mortality per 1,000 live births	56 ^a	52	53	48
Under-five mortality per 1,000 live births	94 ^a	76	68	78
MMR maternal deaths per 100,000 births (modeled estimate)	717 ^a	535	534	462
Stunting (low height for age) percent children under five	26.4 ^b	–	34.1	35.2

Source: SLMICS 2017.

Note: a = SLDHS — Sierra Leone Demographic and Health Survey; b = SLMICS — Sierra Leone Multiple Indicator Cluster Survey.

5. **The health care delivery system in Sierra Leone is coordinated centrally by the Ministry of Health and Sanitation (MoHS).** The MoHS is responsible for the regulation, resource mobilization, provision of health services and quality assurance, health research, policy formulation and implementation, and staff capacity building. The District Health Management Teams (DHMTs) manage, monitor, and oversee the health care service delivery and provision of disease prevention, health promotion, health education, and safe water and environmental sanitation, at the district level across the country. Most of the health facilities in Sierra Leone are public.

6. **Sierra Leone's public health service delivery system is organized in three tiers of service delivery.** The three tiers are primary health care (PHC), secondary health care, and tertiary health care. PHC services are mainly delivered at the Peripheral Health Units (PHUs). The PHUs are categorized in a hierarchy based on the clinical skills of the personnel and the infrastructural availability. These categories include Maternal and Child Health Posts (MCHP), Community Health Posts (CHP), and Community Health Centers (CHCs). Secondary health care is delivered in the district hospitals. These hospitals handle referrals from PHUs and accept walk-in patients who live in the surrounding communities. Tertiary health care is delivered by more advanced and specialized regional hospitals as well as hospitals located in the capital, Freetown. They are mainly the teaching hospitals.

² Sierra Leone Multiple Indicator Cluster Survey (MICS), 2017



7. **Health care financing sources are mainly households, development partners (DP), government, and households.** The government's share of health expenditures is small compared with the other two sources. In 2018, the government's share of all the three sources combined was about 10 percent, which was small compared with the other two sources. DPs support represents over a quarter. Household out-of-pocket (OOP) payments (excluding prepaid private spending) makes up nearly 45 percent. Seventy percent of such household expenditures go into drugs, where there are structural inefficiencies due to irrational prescription and sale of counterfeit drugs. About 10 percent of the population faces the risk of catastrophic spending on health (Directorate of Policy Planning and Information - DPPI, 2020).

8. **The relatively poor health outcomes as noted above are, in part, the results of poor quality and inefficient service delivery.** While there has been some progress, more can be done to improve the quality-of-service delivery. A key bottleneck to improving quality of care is the lack of and poor caliber of skilled core health workers. In Sierra Leone, the skilled health worker density is only 6.40 per 10,000 population (23 per 10,000 is recommended by World Health Organization (WHO)), while physician density is estimated at 0.05 per 1,000 population across the country³. Health care providers can correctly diagnose less than half (44.6 percent) of five tracer conditions.⁴ Sixty-seven percent of doctors can correctly diagnose all the tracer conditions compared with Community Health Officers-CHO (59.7 percent), and nurses (44.5 percent). There is significant variation between provider knowledge and practice gap with huge differences between diagnosis and treatment across facilities. For example, while 97 percent of doctors can correctly diagnose pulmonary tuberculosis, only 5 percent can provide correct treatment. Health care providers in hospitals correctly diagnose 61.7 percent tracer conditions, followed by health centers (49.4 percent) and health posts (46.3 percent). Quality is better in urban areas than rural areas with diagnostic accuracy higher in urban facilities (50.9 percent of clinical cases are diagnosed correctly) than rural facilities (37.3 percent). Quality of care is also affected by large number of volunteers who form substantial proportion (about 40 percent) of frontline health workers. Sierra Leone has an average maternity bed availability of 8 per 1,000 pregnant women (10 per 1,000 pregnant women is recommended by WHO). Only 4.8 percent of PHC facilities have the resources to provide Basic Emergency Obstetric and Neonatal Care (BEmONC). Drug availability, particularly for mothers and children is quite poor with only 56 percent of essential drugs available in most health facilities. The availability of medical equipment is also higher in urban areas (40.0 percent of facilities) than rural areas (28.3 percent), which is below the national average of 31.9 percent. These issues underscore the need to improve quality of essential health services (EHS) to increase utilization of health services and improve the health status of the population.

9. **Although some progress has been made in the implementation of the Health Management Information System (HMIS), more needs to be done to improve its functionality.** Currently, most health facilities are constrained with making HMIS more effective in supporting routine health service delivery. The constraints include lack of requisite human resources, lack of information and communication technology (ICT) equipment, unreliable internet connectivity, and poor power supply. Public facilities rely primarily on paper-based data collection systems, while private sector data are not regularly collected by MoHS. There is little government investment in the HMIS, which leads to inadequate capacity for data management at the central, DHMT and health facility levels. Data use and feedback from the central MoHS to DHMTs and from DHMTs to PHUs remain poor (National Health Sector Strategic Plan (NHSSP) 2017-2021).

³ Sierra Leone has a workforce of 4,826 skilled health workers: 323 physicians, 389 Community Health Officers, 3,185 nurses, 402 midwives, 41 pharmacists, 30 nutritionists and 456 laboratory technicians. (Service Availability and Readiness Assessment - SARA, 2017).

⁴ Tracer conditions include malaria with anemia, diarrhea with severe dehydration, pneumonia, pulmonary tuberculosis, and diabetes (Service Delivery Indicator, SDI 2018 and 2021).



10. **Managing medical waste to ensure service delivery happens in a way that minimizes health care related infections is a major problem across all health facilities in the country.** Almost all health facilities, including Connaught Hospital practice open burning. Besides, incinerators installed in most hospitals and other health facilities have high running costs as they are not properly designed, sized, and optimized. As a result, they generate harmful pollution posing a risk to human health in nearby communities. It is important to revamp waste management systems and ensure that better waste disposal practices become part of the routine service delivery at all levels of the health care delivery system.

11. **Weaknesses in governance and leadership systems are widespread across the health sector, particularly at the district level.** Systems required to govern and ensure that service delivery units and institutions have been resourced are weak. Financial management (FM), procurement, internal audit, human resource management, and administrative systems at health facility and DHMT level are still poor and inefficient. The situation is more pronounced at the district level where a significant number of health facilities and DHMTs have low capacity in planning and implementing activities as well as performing fiduciary functions. Most facilities and DHMTs do not have the personnel who are able to support preparation and execution of health budgets, including donor funds. The inadequate governance and leadership systems often lead to delays in the implementation of activities and supply of health care products to health facilities, which deprive Sierra Leoneans of the opportunity to benefit from timely delivery of quality health services at the primary health care level.

12. **Public schools in Sierra Leone lack basic school health services.** Having recognized the importance of improving learning outcomes of school health services, the Government of Sierra Leone (GoSL) has developed a school health policy that seeks to improve the health of school-age children. The overall objective of the policy is to create a healthy school environment for learning that is free from disease. However, many basic and secondary schools across the country lack school health services. The quality of the existing Adolescent and Youth Friendly Clinics (AYFC) varies greatly due to lack of resources, including staffing and training. The recurring problem, however, is the weak coordination across actors, leading to duplication of services in the urban areas while those in remote areas are underserved. Most of school interventions are project-based, limited in geographical scope, and services are not being provided to many students, particularly in rural areas⁵.

13. **While some measures have been taken by the GoSL to address gender-based violence (GBV), gaps remain in the availability of critical services for survivors, including health care and psychosocial support.** Forms of GBV include domestic violence, sexual assault, including rape of adults and minors, rape in marriage and school-related sexual abuse, as well as harmful practices such as female genital mutilation (FGM). MoHS is mandated to provide free medical examination and treatment and referrals for other essential services, including clinical care and psychosocial support for GBV survivors, but these services are not widely available. Currently, GBV-specialized health services are available in 10 out of the 16 districts. However, survivors are still underserved due to insufficient capacity at the health facility level. It is expected that the GBV services provided as part of this project would complement others not only to raise awareness but to prevent GBV, which in some cases can result in unwanted pregnancies, reproductive health complications and even death of women and girls.

14. **The project will support some of the objectives set out by GoSL in its medium-term National Development Plan (NDP) (2019–2023) to address the country’s health sector challenges.** Those objectives will include the following: (a) improving health systems governance and human resource management; (b) improving primary and secondary health care delivery systems; (c) strengthening HMIS through digitalization of health care systems and processes; (d) encouraging public-private partnerships (PPP) by developing the policy and legal

⁵ Government of Sierra Leone School Health Policy, 2020.



framework to pave way for private investments in health; and (e) promoting efficient health-care delivery; and (f) reintroducing school health services in secondary schools.

15. **The World Bank has assisted Sierra Leone’s health sector in various projects.** Through the Ebola Emergency Response Project (EERP-P152359), the World Bank contributed to controlling outbreaks of the Ebola virus disease and the recovery of selected essential health services. The EERP also supported the establishment of the National Emergency Medical Service (NEMS), which now manages a network of 81 ambulances across the country. The EERP also helped the professional development of medical personnel, although more can be done to meet the growing health care needs of the country. Through the Health Services Delivery and Systems Support Project (HSDSSP-P153064), the World Bank assisted the national Community Health Worker (CHW) program, supporting the provision of technical assistance to improve program management and payment of incentives; construction of a state-of-the-art health facility in Kailahun District; and human resource development with a focus on training medical students at the School of Clinical Sciences (SCS) in Makeni. The World Bank also supported the health sector through the Regional Disease Surveillance Systems Enhancement Project (REDISSEP154807), which assists in strengthening the country’s laboratory system for improved testing capacity as well as the disease surveillance system. REDISSE also enhanced the operational capacity of the National Emergency Operation Center (EOC) and cross-border collaboration to exchange information. More recently, the World Bank, through the COVID-19 Emergency Preparedness and Response Project (CEPRP-P173803), has supported Sierra Leone in making improvements to electronic data reporting and availability of laboratory results within 72 hours. CEPRP has boosted the capacity of laboratory personnel to diagnose COVID-19 cases and made updates of COVID-19 cases and vaccinations to the 117-call alert system.

16. **The proposed project is designed to provide additional support to the MoHS as it continues to improve its health services.** There is a need to build on past projects, with strengthened disease prevention, service delivery, and pandemic preparedness and response, through an integrated approach at the district level. The proposed project will support development of a hub-and-spoke organization design at the district level to deliver health services, particularly for women and children (Box 1). This innovative approach to improving quality EHS will be implemented through a PPP. With support of the World Bank, the GoSL intends to deploy a partnership between the MoHS and Partners in Health (PIH) to implement the proposed activities. PIH is a reputable US-headquartered international public health not-for-profit organization, which collaborates with developing country governments to strengthen health systems to deliver quality health care services. PIH has experience in designing and executing district-focused, PHC services in Lesotho, Rwanda, and Sierra Leone.

Box1. Hub-and-Spoke Model Defined

Hub-and-spoke organization design is a model which arranges service delivery assets into a network consisting of an anchor health facility (hub) which offers a range of services, complemented by lower-level facilities (spokes) which offer limited services, referring patients, who require more intensive services to the hub for treatment.

Basic healthcare services are broadly distributed across the network, permitting the bulk of healthcare needs of the target population to be addressed locally. Only when complexities emerge that require care falling outside of the scope of services provided at satellite facilities are patients referred to the hub for treatment.

Source: Elrod, J. K. and Fortenberry Jr., J. L (2017). The hub-and-spoke organization design: an avenue for serving patients well. BMC Health Services Research 2017, 17(Suppl 1):457.

17. **In Sierra Leone, PIH has collaborated with MoHS to deliver improved health services in Kono District.** BEmONC coverage in Kono District increased from 20.0 percent in 2017 to 39.9 percent in 2020. The Cesarean



section coverage rate doubled from 2 percent in 2017 to 4.2 percent in 2020. Regarding quality of care, the decision-to-incision time for obstetric complications decreased by 69.0 percent. Maternal health-related referrals from Wellbody Clinic to Koidu Government Hospital resulted in a 93.0 percent recovery rate (149 out of 161) in 2018. Other outcomes achieved through the MoHS–PIH partnership in Kono District include only one maternal death at the main PIH Wellbody Clinic between 2016 and 2020; a low mortality rate of 1 percent for children under five years old who tested positive and received treatment for malaria; and a 75 percent reduction in the stillbirth rate between 2018 and 2020. Refer to Annex 3 for information on the PIH programs in Lesotho and Rwanda.

C. Relevance to Higher Level Objectives

18. **The proposed project is aligned with the World Bank Group’s Country Partnership Framework (CPF) FY21–FY26 for Sierra Leone⁶.** The proposed project is in line with “Objective 2.1: To deliver quality and inclusive education and health services of the CPF focused area 2: Human capital acceleration for inclusive growth” (World Bank 2020). The CPF, which buttresses Pathway 4 identified in the Systematic Country Diagnostic (SCD) 2018, emphasizes increasing human capital for new opportunities. It outlines three focus areas: (a) human capital acceleration and inclusion; (b) economic diversification and competitiveness with resilience; and (c) institutions and governance for accountability. The proposed project is in line with “Objective 1.2: To improve access to quality reproductive, maternal and child health services and early warning disease surveillance of the CPF focused area 1”. The project will implement activities that support improved quality reproductive, maternal and child health. Specifically, it will address both the demand and supply sides of the health system, improving quality of health services delivery, and generating demand for reproductive maternal and child health services, particularly at the community level.

19. **The proposed project is also aligned with the GoSL’s NDP 2019–2023 whose main objective is to accelerate human capital.** The strategic objective of the NDP is to transform the health sector from an under resourced, ill-equipped, and inadequate delivery system into a well-resourced and functioning national health care delivery system that is affordable and accessible to all. The project would support this important GoSL’s strategic objective by strengthening the health system. It is aligned with the GoSL’s key health sector strategies, such as the NHSSP 2017–2021 and the Universal Health Coverage (UHC) Road Map.

II. PROJECT DESCRIPTION

20. **The proposed project will be financed through IDA and Global Financing Facility (GFF) grants in the amount of US\$40 million equivalent and US\$20 million respectively.** The project aims to address the challenges facing the health sector toward achieving UHC by addressing the strategic pillars (1–8) of the UHC roadmap to strengthen the health systems, by using the hub-and-spoke service delivery model. The expected outcome is to build resilient health systems to set up the foundation for an efficient, effective and accountable health system to increase coverage and uptake of health services and to reduce morbidity and mortality.

⁶ International Development Association, International Finance Corporation, Multilateral Investment Guarantee Agency, Country Partnership Framework for republic of sierra leone for the period FY21-FY26, April 19, 2020. Report No. 148025-SL



A. Project Development Objective (PDO)

PDO Statement

21. The PDO is to increase utilization and improve quality of maternal and child health services in the selected areas.

PDO Level Indicators

- a. People who have received essential health, nutrition, and population (HNP) services (disaggregated by female, children immunized, women and children received basic nutrition services, deliveries attended by skilled health personnel) (Number).
- b. Pregnant women attended antenatal care (ANC) four or more times by skilled health personnel in target districts (Percentage).
- c. Institutional delivery rate in target districts (Percentage).
- d. Average Score of Health Facility Quality of Care⁷ in the target facilities (Percentage).

B. Project Components

Project Area:

22. **The main project activities will be implemented in the following five districts: Bonthe, Falaba, Kailahun, Tonkolili and Western Area Rural.** These areas are with high risk factors related to maternal and child mortality and vulnerable to climate change. A Climate and Health Vulnerability Assessment (CHVA) has been prepared to inform the implementation of project activities to consider climate-related risks such as flooding, storms, heat stress and sea level rise.⁸ Table 2 provides details of the district population size, selection criteria and selected health facilities. All selected areas but Western Area Rural, show the highest levels of poverty rates in the country. The total poverty rate for each district, according to a 2018 survey was Bonthe (51.9 percent), Falaba (81.3 percent), Kailahun (56.7 percent), Tonkolili (84.8 percent) and Western Area Rural (37.7 percent)⁹. The project will strengthen local systems and capacity to effectively manage and deliver health services to the target population. While the project focuses mainly on the selected districts, other critical national level systems will be strengthened to support health service delivery at the same time.

Table 2: Selected Districts and Health Facilities

No.	Districts	Population Size (2020)	Selection Criteria	Selected HUB Facilities
1.	Bonthe	225,000	<ul style="list-style-type: none"> • High-disease burden • High number of deliveries • Weak health systems • Hard-to-reach areas 	<ul style="list-style-type: none"> • United Brethren in Christ (UBC) Hospital • CHC Moriba Town

⁷ The composite score includes the availability of all priority drugs, essential equipment, diagnostic tests, and the existence of minimum level of clinical staff, according to staffing norms.

⁸ More details on the impacts of climate change on health in Sierra Leone and the climate adaptation and mitigation measures that will be implemented through this project are included in the Environmental and Social Safeguards section, under Climate Co-Benefits.

⁹ 2018 Sierra Leone Integrated Household Survey Report.



No.	Districts	Population Size (2020)	Selection Criteria	Selected HUB Facilities
				<ul style="list-style-type: none"> • CHC Tihun
2.	Kailahun	642,000	<ul style="list-style-type: none"> • High number of deliveries • Difficult access to CEmONC • Poor road conditions • Large number of patients • Large catchment population 	<ul style="list-style-type: none"> • CHC Bandajuma Yawei • CHC Buedu • Jojoima-CHC
3.	Falaba	229,000	<ul style="list-style-type: none"> • New district (Falaba) with no hospital and no DHMT office • New health systems to be developed 	<ul style="list-style-type: none"> • CHC Kurubonla • CHC Falaba • CHC Mongo
4.	Tonkolili	570,000	<ul style="list-style-type: none"> • High disease burden • High service utilization • Health facilities in catchment area overwhelmed 	<ul style="list-style-type: none"> • CHC Hinistas • CHC Masingbi • CHC Bendugu
5.	Western Area Rural	495,000	<ul style="list-style-type: none"> • High disease burden • Proximity to Freetown but underdeveloped and crowded rural facilities • Weak health system • High population with high service utilization • MCH services inadequate 	<ul style="list-style-type: none"> • Waterloo • CHC Goderich

Note: CEmONC — comprehensive emergency obstetric and neonatal care; CHC — community health clinic; DHMT — district health management team; MCH — maternal child health; PHUs — peripheral health units.

23. **The proposed project will consist of four components which are described below.** Through these components, the project will prepare the MoHS to implement the hub-and-spoke services delivery model to improve quality essential health services. The approach will be supported by targeted implementation of digital health systems to improve efficiency of service delivery. The project will also address the challenges posed by COVID-19 pandemic by establishing a link between public health emergency response and essential health services.

Component 1: Improving Quality, Efficiency, and Effectiveness of Reproductive, Maternal, Newborn, Child Health and Nutrition Services (US\$31.28 million equivalent: IDA US\$21.00 million equivalent; GFF EWEC US\$5.28 million; GFF WCA US\$5.00 million)

24. **Proposed activities under this component will support the delivery of quality essential health services** in Bonthe, Falaba, Kailahun, Tonkolili, and Western Area Rural Districts. This component will be jointly financed by IDA, GFF EWEC and GFF WCA Grant. It will finance an assessment to determine staffing, supply and equipment, infrastructure of health facilities designated as hubs and spokes. It will support facility-level management information systems by developing integrated clinical processes, data registry, digital forms and other documentation, and digital patient files to inform clinical decision-making as essential parts of electronic medical records (EMR). The component will also finance the recruitment, training and coaching/mentoring of health professionals, administrative and operational personnel, including training staff on preventing and treating



climate-related health risks such as those observed during heat and flooding events. The component will make available medicines, laboratory supplies and energy efficient equipment, consumables, as well as cleaning and infection prevention and control materials. For instance, stock lists and standardized request processes will be created and buffer stocks for essential medicines will be maintained to avoid stockouts. The component will also finance climate-smart rehabilitation and/or construction of the 14 selected health facilities and provision of climate-sensitive medical equipment, constant water, and electricity supply, including solar energy. It will support facility operations and routine maintenance to ensure smooth functioning of the facilities as well as climate adaptation measures to minimize negative climate-related health impacts on patients.

25. CHCs will be the hubs, each of which will be networked with about 20 MCHPs and Child Health Posts (CHPs) (spokes). Services they are expected to offer include BEmONC, basic Reproductive, Maternal, Newborn, Child, and Health (RMNCH) services, treatment of severe childhood illnesses, laboratory and pharmacy services, screening, and referral for non-communicable diseases (NCDs), and climate-sensitive surveillance and response to epidemic disease outbreaks. The spokes are expected to provide ANC, postnatal and neonatal care, growth monitoring, basic first aid, routine vaccinations, nutrition services and products, promotion of breastfeeding, thermal care, and hygiene practices. The spokes will refer institutional deliveries, and critical under-five and RMNCH cases to the hubs. The referral system will therefore be strengthened. This will involve improved communication structures including a closed user group, which will connect the hubs and the spokes. In addition, patients will be helped with referral scheduling and transportation from the spokes to hubs using the existing ambulance services operated under the NEMS. The project will finance operating and training costs (fleet training, fleet support, communications, and maintenance costs) necessary for smooth running of the referral system. Also, the project will procure 14 fuel-efficient ambulances to exclusively serve all the hubs in the project area. The hubs will refer critical U5 and RMNCH cases, as well as those requiring specialized care to the district hospitals. The referral systems from hubs to hospitals will be mapped for each target facility and will build on existing NEMS and DHMT structures, with targeted time-limited equipment, maintenance, communication materials to make the existing systems functional, based on a structured PIH-led assessment. Providers in hubs will be trained on correct use of existing protocols and standard operating procedures (SOPs) to ensure referrals happen for the right conditions, including high risk pregnancies, management of medical and surgical emergencies, major surgical interventions, inpatient care, laboratory testing, and medical imaging. Monthly coordination calls will be set up between hubs and hospitals to troubleshoot system-level issues.

26. Nutritional support will be an integral part of the routine services provided by the hub facilities. Nutritional services will be provided to the target beneficiaries, comprising infants, children under 5, pregnant and lactating mothers, and other vulnerable adults, meeting defined clinical criteria. Children under 5 would be screened as part of routine services, with targeted referrals from communities by CHWs, and offered one of two packages depending on clear indicators, including Body Mass Index (BMI) and Mid-Upper Arm Circumference (MUAC). Those diagnosed with severe acute malnutrition (SAM) would receive time-limited support with ready-to-use therapeutic foods (RUTF), provided to their parent/caregiver after clinic visits, until measurable improvements in indicators can be observed. Children with moderate acute malnutrition (MAM) would be supported through provision of locally available, affordable, nutrient- and protein-rich foods, including benni mix, a food consisting of locally grown beans mixed with rice and additional protein. All other caregivers with children not diagnosed with acute malnutrition will receive age-appropriate infant and young child nutrition counseling, including counseling on climate-health related risks such as heat stress and proper nutrition. For efficiency and sustainability, mothers and caregivers would be given bulk commodities and taught preparation methods until children no longer need additional support, as determined in subsequent clinic visits. Additional nutritional support would be provided to limited numbers of adults where there is a clear clinical need based on evidence,



with a focus on pregnant women showing signs of poor nutrition during their first ANC visit. Other eligible adults might include newly diagnosed clinically malnourished patients undergoing treatment. In all cases, nutrition support will be integrated into clinic flows and programming overseen by trained nurses. There will be community outreaches to women of childbearing age, especially teaching them on how to prepare highly nutritious food for their children. The existing mothers support groups (MSGs) will support this activity in the communities.

27. **Each hub is expected to supervise and serve as a training center for the spokes in its network.** Hub administrators will provide monthly outreach visits with clinical, operational, and monitoring and evaluation (M&E) specialists to enhance clinical quality and management, data reporting and referral algorithms at the spokes. The hub administrators will routinely report to the District Medical Officer (DMO) of the DHMT, who will be responsible for oversight. Staff at hubs will receive a one-month refresher training on the basic package of emergency obstetric and neonatal care, M&E, quality improvement and general medicine, followed by weekly mentorship by district-based supervisory staff. Maternal health mentorship will be adapted from an existing mentorship model piloted in Kono District, which focuses on ensuring all mothers have partographs charted, clinicians can correctly start and interpret the partograph, and can identify emergencies through the Maternal Early Obstetric Warning Signs (MEOWS) and make referrals as appropriate. A simplified training package to improve newborn survival will focus on early initiation of breastfeeding, thermal care, and hygiene practices. CHWs, who will be trained to screen and refer common illnesses, will carry out community-based sensitization activities to drive increases in visits by children under five years of age and ANC visits and facility-based deliveries. They will also be trained on identification of climate-health related risks. Quality improvement activities will also be undertaken to further promote service utilization. Quality of care will be improved through upgrading operational processes, including maintenance systems, information systems and clinical protocols using existing tools developed by MoHS. Providers will be trained to ensure that services are youth-friendly, promote sexual and reproductive health and the impacts of climate change on health.

28. **The component will strengthen health systems in Bonthe, Falaba, Kailahun, Tonkolili, and Western Area Rural Districts to improve primary healthcare service delivery.** This will include establishing an integrated governance and public financial management (PFM) system with adequate staffing and resources at the DHMT and building capacity of DHMT staff. Technical support will be provided in areas such as FM and planning, supply chain, public health, and data management. Day-to-day support will be combined with formalized teaching, including through an online learning community, a cross-district learning collaborative, and in-person training in key public health management skills. Learning materials will be customized using a mixture of existing courses from Kono District and materials adapted from PIH-led health system improvement projects in Rwanda and Lesotho. The component will also upgrade the M&E system by reviewing and updating data collection forms, the M&E manual, indicator protocols, and reporting tools. The project will support digitalization of the HMIS, which will entail assessing the existing systems, providing digital tools, training of data entry clerks, and working with M&E officers to strengthen their capacity to use the systems. This will reduce paper record loss, which has been a challenge in the country. Support will also be given to strengthen CHW operational capacity by exploring the possibility of working with nongovernmental organizations (NGO) with track records of good quality CHW to run the district CHW program, as well as financing regular supportive supervision, provision of supplies and tools, and rewards to increase retention and boost performance of CHWs.

29. **The project will also cover health facility water availability, school health and GBV- support services.** Specific areas of focus will include building the capacity of environmental health and sanitation workers to improve availability of health facility water at the point of use and to ensure more resilient infrastructure to



reduce the damage by climate variability and change. This will entail reviewing and updating of water, sanitation, and hygiene (WASH) standard operation procedures, protocols, and guidelines in designated health facilities in Bonthe, Falaba, Kailahun, Tonkolili, and Western Area Rural Districts. The project will make infrastructure upgrades to ensure reliable availability of pipe-borne running water at the designated health facilities. The project will also supply first aid kits to selected schools in Bonthe, Falaba, Kailahun, Tonkolili, and Western Area Rural Districts. Teachers will be trained in basic health care skills to allow them to treat first aid cases that occur in schools, while referring serious cases to health facilities for treatment. The project will support services for survivors of GBV across targeted health facilities, including providing health workers with relevant GBV training to assist GBV survivors.

Component 2: Strengthening National Level Systems (US\$15.40 million equivalent: IDA US\$7.00 million equivalent; GFF EWEC US\$3.4.00 million; GFF WCA US\$5.00 million)

Subcomponent 2.1: Strengthening leadership and human resource for health (HRH) capacity, PFM, HMIS, SLeSHI, pharmaceutical supply chain systems, and private sector participation (US\$11.50 million: IDA US\$5.50 million; GFF EWEC US\$3.00 million; GFF WCA US\$3.00 million)

30. **Proposed activities under this subcomponent aim to strengthen leadership and clinical and nonclinical capacities to effectively drive the health care delivery agenda of the country.** This subcomponent will support refresher courses in PFM, public health (including climate-related health risks) and health economics for senior management at MoHS to improve planning, ensure effective implementation of policies, and enforce accountability and fiduciary measures. It will also support operational costs (e.g., communications, mobility, supervision, logistics etc.) of the newly established MoHS delivery team. It will support setting up a unit in University of Sierra Leone, Fourah Bay College to train health economists and health financing specialists, and provide technical assistance aimed at developing the curriculum for the course.

31. **The subcomponent will also strengthen academic staffing, review curriculum, and establish a formal affiliation between the University of Sierra Leone and the Makeni School of Clinical Sciences (MSCS).** There will also be support for curriculum development for Medicine and Allied Health Sciences, including the Dentistry Department and Public Health Department and Midwifery School. Assistance will be provided to a training program aimed at upgrading the skills of State Enrolled Community Health Nurses (SECHNs) to enable them to transition to becoming midwives and state registered nurses (SRNs). The subcomponent will also help finance GoSL's efforts to expand an ongoing training of general surgery students, including ensuring full accreditation for postgraduate training in pediatrics, obstetrics, and gynecology. The project will also support specialized postgraduate training in medico-surgical nursing, midwifery, and pediatrics, etc.

32. **The project will support the establishment of a unified financial management and reporting portal to align donor expenditures with the government system within the overall PFM architecture of the country.** A similar portal has been successfully set up in Bangladesh with World Bank support. The objective is to build accountable institutions that respond to the needs of citizens and ensure that funds are used for their intended purposes. The system, which will be linked to MoHS and the Accountant General's Department, will be designed to improve the use of country systems by minimizing manual paper-based processes and synchronizing fragmented parallel fiduciary systems, addressing delays in reporting, and weak financial records management. The project will support the institutionalization of resource mapping and expenditure tracking (RMET) at MoHS at district level. It will also finance a study to assess the possibility of digitalizing the revenue and accounting systems in Connaught Hospital and a district hospital. The main goal of this study is to improve revenue and



expenditure management at the health facility level. Findings of the assessment will inform the piloting of digitalized revenue and accounting systems at the two hospitals.

33. **The project will support digitalization of the HMIS**, which will entail providing technical assistance for assessing the existing systems nationally, providing digital tools, training of data entry clerks, and working with District M&E officers to strengthen their capacity to use the systems. Digitization will happen simultaneously at national and the selected districts (Bonthe, Falaba, Kailahun, Tonkolili, and Western Area Rural) levels to ensure changes at the district level are linked to and integrated with national systems (e.g., District Health Information Software (DHIS2)). Key beneficiary institutions will include the hubs and the five district hospitals that serve the hub facilities. Digital record-keeping and M&E systems including EMR at these hospitals will be strengthened to reduce paper record loss. The project will also support improving core competencies at DPPI level so that they are better equipped to support districts with data quality assurance and conduct periodic HMIS supportive supervision and provide feedback. It will support DPPI's activities to conduct analyses, promote data use to improve policy and decision-making, and supervise and assure data quality. DPPI's capacity will be developed to produce dissemination materials such as briefs, reports, posters, flyers, stories, videos, infographics, and messaging for various communication channels, including social media platforms, to widely share project results. DPPI's competencies in producing routine analytical and performance reports will also be strengthened.

34. **The project will support Sierra Leone Social Health Insurance (SLeSHI) to implement a social health insurance scheme**, which will be the driver to attaining UHC and sustainable healthcare financing. It will finance technical assistance (cost of consultants) to develop facility and provider accreditation standards, build local capacity in social health insurance and provider accreditation and auditing to support and sustain quality of care and ensure value for money (VfM) for insurance beneficiaries, and develop a matrix for billing and claims management system, including risk management protocols and provider auditing. The project will also finance targeted health insurance related studies based on business needs to inform policy and decision-making. It will also support refresher courses in PFM, public health, health economics and health insurance for senior management of SLeSHI Secretariat. Selected capacity building interventions, including on-the-job training to enhance staff of the secretariat's knowledge in managing claims and enrollment will also be supported.

35. **In collaboration with the World Bank Governance Global Practice (GP)**, the project will support MoHS to strengthen supply chain systems at the National Medical Supplies Agency (NMSA). Inventory management software will be procured to improve the operational efficiency of NMSA. This activity will be financed under the World Bank Accountable Governance for Basic Service Delivery (P172492) project as part of the HNP and Governance GP collaboration. Innovative digital and offline data platforms that work with and improve existing data management information system at NMSA will be designed and rolled out. While the Governance project will finance the software and digital platform, this project will finance technical assistance to develop NMSA's strategic and operational plans.

36. **Private sector participation in health services delivery will be fostered as part of the project.** The project will finance technical assistance to help (a) identify and support policy and regulatory reforms to create enabling environment for private sector investment and contribution at all levels of health care delivery system; (b) build capacity of both public and private facilities to engage in contracting arrangements and attract appropriate investments in health; and (c) support establishment of a sustainable PPP engagement platform to deepen public private partnership dialogue (PPD) in the sector. These activities would ultimately build trust, create opportunities for robust public private engagement and increase private investments in the health sector.

Subcomponent 2.2: Strengthening epidemic preparedness, understanding noncommunicable disease risks, and



managing medical waste (US\$3.90 million: IDA US\$1.5 million; GFF EWEC US\$0.4 million; GFF WCA US\$2.00 million)

37. **The cumulative effects of crises relating to Ebola, the COVID-19 pandemic and climate change have underscored the need to further strengthen systems to prevent, detect and respond to infectious and vector-borne disease outbreaks.** To sustain GoSL's emergency preparedness and response efforts, this project will support selected national systems by transitioning the national EOC to a viable National Public Health Agency (NPHA) by developing SOPs and building the capacity of existing staff to improve its operational efficiency and climate-sensitive disease surveillance. The project will strengthen the 117-call alert system by upgrading its software and covering a portion of its operating costs and upgrade the country's main points of entry by supporting minor climate-sensitive rehabilitation works, including equipping the Koidu crossing point to allow for effective delivery of cross-border services and disease surveillance during epidemics. It will also improve human resources for animal health by supporting the training of 30 para-veterinary officers in collaboration with the Ministry of Agriculture and Forestry (MAF). In addition, the project will finance development of a new para-veterinary training curriculum at a designated tertiary education institution.

38. **The project will collaborate with the ongoing COVID-19 health project and REDISSE Project, particularly in risk communication to reduce COVID-19 vaccine hesitancy.** It will strengthen the linkage between Risk communication at national, district, community level. At the community level, the CHWs will be at the forefront of the implementation of the risk communication activities. They will work closely with the DHMTs to sensitize communities about the need to be fully vaccinated.

39. **The project will contribute to efforts to understand NCD risks.** With the support from the World Bank, a national NCD policy and strategy have been developed. To help implement the strategy, the project will support a WHO STEPwise Approach to Surveillance of Noncommunicable Diseases (STEPS) survey to provide evidence and data for NCD risk factors, especially for climate-vulnerable populations. The last STEPS survey was conducted in 2009. At the same time, the project will support the development of guidelines for managing NCDs at the health facility level.

40. **The project will also pilot an eco-friendly Centralized Bio-Medical Waste Treatment Facility (CBWTF) in Western Urban and Western Area Rural districts in the Freetown area.** The project will finance the establishment of a medical waste center and the procurement of medical waste management machines, fuel-efficient refrigerator trucks, and recurrent costs of hiring a facility administrator. Facility operations and maintenance manual that would guide the operation of the facility will be developed. The establishment of this facility will be informed by the Sierra Leone Climate and Health Vulnerability Assessments (CHVA) to ensure the implementation of this activity takes account of climate related flooding risks and projected changes in sea level. The government is exploring several options in terms of CBWTF technologies, and the possible location of the facility based on the result of an initial assessment of the expected quantity of medical waste in the target areas, potential sites, and technology options. A feasibility study to determine type of technology, the prevailing baseline conditions, risk levels associated with the locations, and management and handling of the CBWTF will be conducted.

Component 3: Project Management and Monitoring and Evaluation (US\$10.02 million equivalent: IDA US\$8.70 million equivalent; GFF EWEC US\$1.32 million)



Subcomponent 3.1: Project management (US\$9.11 million: IDA US\$8.00 million; GFF EWEC US\$1.11 million)

41. **The DPPI of MoHS will be the coordinating unit of the project, providing technical oversight of project implementation.** Led by the Director of DPPI, the unit will ensure that the implementing partners (IPs) execute their planned activities and submit reports to the Integrated Health Project Administration Unit (IHPAU) on time. IHPAU will manage day-to-day operations of the project. It will focus primarily on managing the fiduciary (FM and procurement), M&E, and environment and social aspects of the project. A team of MoHS and IHPAU staff will jointly supervise and monitor implementation of project activities periodically. IHPAU will be responsible for producing quarterly implementation progress and annual audit reports. This subcomponent will strengthen the capacity of IHPAU staff through a combination of on-the-job training, technical assistance, operational clinics, and targeted short courses. It will also finance all the IHPAU's staff costs, including technical assistance to strengthen the capacity of procurement, finance, M&E, and safeguards units.

Subcomponent 3.2: Strengthening M&E and knowledge management (US\$0.91 million: IDA US\$0.70 million; GFF CG US\$0.21 million)

42. **The project will support activities to build the M&E capacity of DPPI, IHPAU and DHMTs to improve data collection and analysis at the central, district, and facility levels.** The capacity of M&E staff at the central MoHS, IHPAU, and district level will be strengthened to improve data quality in terms of completeness, accuracy, consistency, and timeliness. This will be done through a recruitment of a technical assistance to provide hands-on-the-job training for the M&E staff. The aim is to strengthen existing M&E systems for the key stakeholders such as DPPI, IHPAU, DHMTs, and so forth. Levels of project M&E implementation will include results framework monitoring, activity implementation and financial monitoring, implementation support missions, midterm review and preparation of implementation completion and results reports (ICR), and monitoring of training and capacity building. Data collection and reporting will include data generation and analysis and beneficiary/impact assessment (baseline, midline and endline). To adequately inform decision-making, strong M&E utilization activities will be carried out during implementation. Finally, this subcomponent will support knowledge management by documenting and disseminating project achievements and lessons learned.

Component 4: Contingent Emergency Response Component (CERC) (US\$0.00)

43. In accordance with World Bank Policy on Investment Project Financing (IPF), paragraphs 12 and 13, a contingent emergency response component is added. This component will respond to an eligible crisis or emergency, as needed. It will allow the government to request the World Bank for rapid reallocation of project funds to respond promptly and effectively to an eligible emergency or crisis that is a natural or artificial disaster or crisis that has caused or is likely to imminently cause a major adverse economic and/or social impact. If the World Bank agrees with the determination of the disaster and associated response needs, this component will draw resources from the categories financing other components and/or allow the government to request the World Bank to recategorize and reallocate financing from other project components to cover emergency response and recovery costs. This component could also be used to channel additional funds should they become available because of an emergency. Disbursements will be made against a positive list of critical goods or the procurement of works and consultant services required to support the immediate response and recovery needs.

C. Project Beneficiaries

44. **The main project beneficiaries are women and children in the project areas.** Health practitioners and



other relevant sector partners from governmental and nongovernmental agencies, policy makers at the national and district levels, are secondary beneficiaries.

D. Results Chain

45. **The key problems that the project is designed to address are the high levels of maternal and child mortality in Sierra Leone.** The project will directly tackle both supply- and demand-side constraints, as well as the underlying weaknesses in the health system. The theory of change is explained in Box 2.

Box 1: Summary of how change will be achieved

If the quality, efficiency, and effectiveness of services are improved in priority districts, especially at primary health care level, through:

- **optimized health facilities and service delivery networks** that provide the Basic Package of Essential Health Services via piloting a ‘hub and spokes’ model in Kailahun District and rolling-out to accompanying districts; with CHWs driving demand for services through community-based sensitization.
- **strengthened health systems:**
 - establishment of an integrated governance and PFM system.
 - strengthened capacity of DHMTs, including financial management and planning, supply chain, public health, and data management.
 - upgraded M&E systems and digitalizing HMIS.
 - strengthened CHW operational capacity, including support from NGOs, regular supportive supervision, provision of supplies and tools, and performance-based incentives for CHWs.
- **strengthened services for improved water quality in health facilities, school health and GBV support**, including improved capacity, procedures, protocols, and guidelines.

AND if health systems are strengthened at national level through:

- **strengthened leadership and non-clinical and clinical human resources** for health capacity including enhanced skills and academic training in PFM, public health, and health economics; ensuring a fully operational MoHS delivery team; and improving clinical training in dentistry, public health, midwifery and pediatrics, obstetrics, and gynecology.
- **improved public financial management** through the establishment of a unified financial management and reporting portal to align donor expenditures with the government system and institutionalizing RMET.
- **strengthened supply chain systems**, including improving inventory management.
- **increased private sector participation** in health services delivery through strengthened policy and regulatory environment for private sector investment and engagement in the health care delivery systems.
- **strengthened capacity and utilization of human resources for health**, including increasing skills of health professionals and improved performance and retention of CHWs.
- **enhanced epidemic preparedness and response**, including a strengthened NPHA, alert systems, point of entries (POE) and human resources for animal health.
- **increased evidence to better understand NCD risk factors** and guidelines for improved management of NCDs in health facilities.
- **improved central medical waste management** through the pilot of an eco-friendly CBWTF in Western Area Urban and Western Area Rural districts in the Freetown area.

THEN there will be increased utilization and improved quality of reproductive, maternal, child health and nutrition services in the selected areas;

AND communities will have improved nutrition practices for infants and young children and management of NCDs.

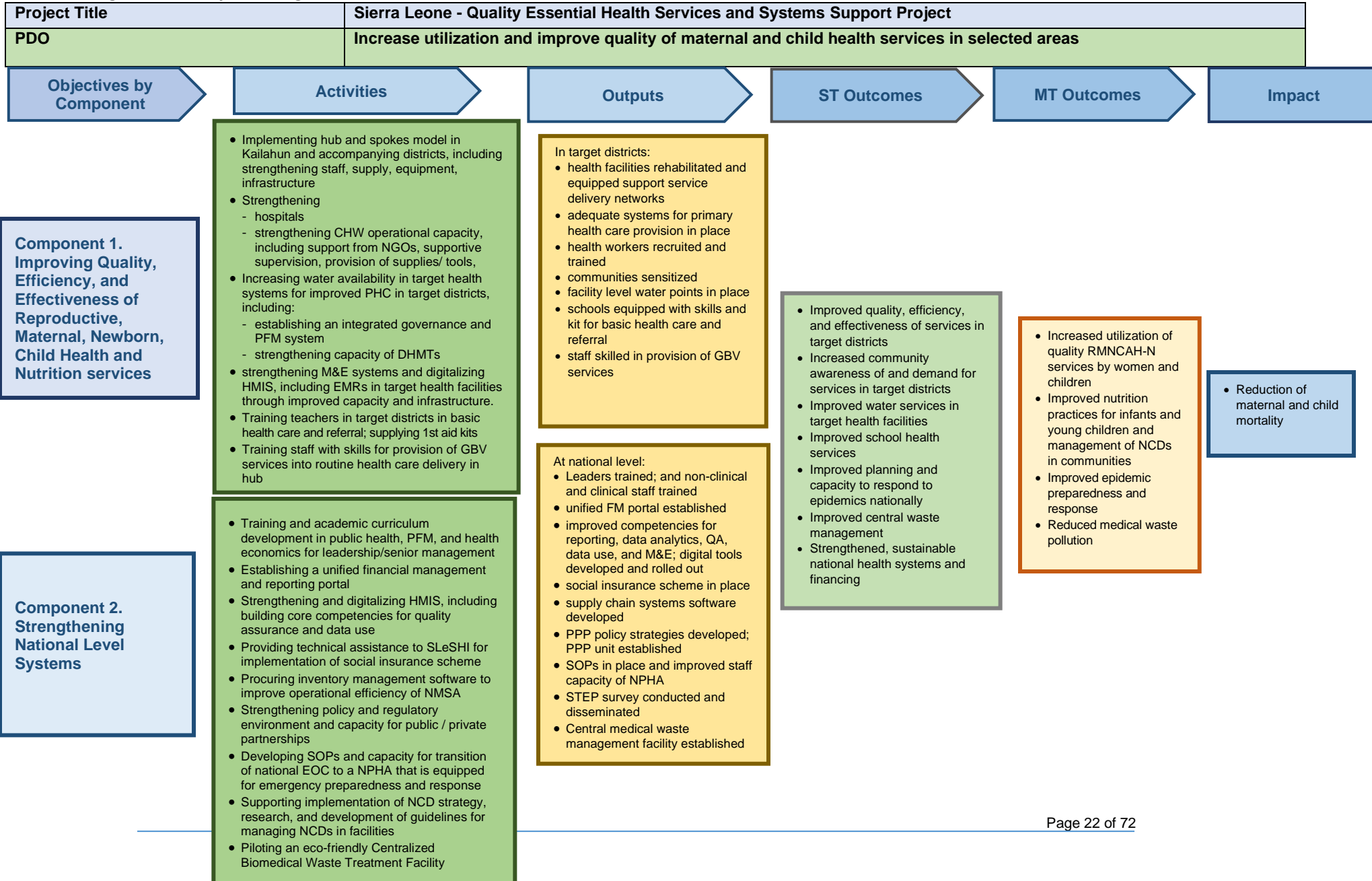
AND there will be improved preparedness and response to epidemics.

AND children and their communities will live in cleaner environments, and there will be improved sanitation and hygiene in health facilities and schools.

Which, **combined**, will contribute to a reduction in maternal and child mortality, malnutrition, and adolescent pregnancy in target districts.



Figure 1: Theory of Change





46. **The key assumptions are** that: (a) non-health ministries (Education, WASH, and so forth) are committed and put mechanisms in place for cross-sectoral collaboration for strengthening school health services, environmental sanitation and medical waste management; (b) the COVID-19 pandemic will not significantly impact the availability of adequate human resources for the delivery of health services; and (c) the government and its partners remain committed to health systems strengthening as an essential foundation for improved service delivery.

E. Rationale for World Bank Involvement and Role of Partners

47. **The SCD outlines human capital development as one of the pathways to accelerate growth and reduce poverty in Sierra Leone.** The rationale for World Bank support to strengthen primary care service delivery is strong and will improve human capital and provide new opportunities in health and education. Maternal and child mortality rates need to be reduced to improve economic growth and increase household incomes. The project will build upon the gains achieved under the previous and ongoing projects (EERP-P152359, HSDSSP-P153064, REDISSE-P154807, and CEPRP-P173803) to increase access to and utilization of EHS in the project areas. The HSDSSP is expected to close on December 31, 2021. The proposed project is expected to start disbursement around the same time, which provides a seamless transition between the two projects. By continuing to support the government's effort to strengthen systems in health and subnational administration — such as service delivery, health information management systems, PFM, and governance — the project will further enhance the efficiency of the use of existing public sector resources and put the country on the path of achieving UHC.

48. **World Bank's support through the proposed project will be complemented by additional investment leverage through mainstreaming cross-sectoral collaboration with non-health ministries.** The project will collaborate with sectors beyond health which have impact on health and nutrition outcomes, such as in water, agriculture, education, and energy for greater cross-sectoral links and synergies. The newly approved Enhancing Sierra Leone Energy Access Project (P171059) will provide standalone photovoltaic solar panel systems to selected health facilities. The World Bank is also well positioned to leverage expertise from across the World Bank Group to support the project in the areas of health financing, governance, and PFM, all of which are critical elements to strengthening government systems and supporting capacity building.

49. **Several key DPs support the GoSL both directly and indirectly through their activities in the health sector.** GFF is co-financing this project. GFF aims to accelerate progress on health and nutrition of women, children, and adolescents by 2030 through smart, scaled, and sustainable financing, and thereby, contribute to achieving UHC. The GFF-supported country-led process adds value through prioritization, coordinated financing, implementation at scale and learning (Box 2). WHO supports the delivery of EHS, the strengthening of health system and the provision of health security and emergency preparedness. The Foreign Commonwealth and Development Office (FCDO), formerly known as Department for International Development (DFID), supports access to vital health services such as strengthening the health system, training midwives, providing lifesaving medicines, and upgrading health facilities with better water, sanitation, and electricity. The Global Fund (GF) supports the fight against HIV, TB, and malaria and for programs to strengthen systems for health across the country. The Global Alliance for Vaccines and Immunization (GAVI) supports the comprehensive expanded program for immunization (EPI) MoHS 2017–2021 multiyear plan. The United Nations Population Fund (UNFPA) support focuses on the improvement of sexual and reproductive health services, through midwifery programs, better emergency obstetric and newborn care, free health care initiative, and effective management of reproductive health commodities. The United Nations Program for HIV/AIDS (UNAIDS) supports the country with a comprehensive package of services to fight the spread of HIV/AIDS among women, men, and children. The



United Nations Children’s Fund (UNICEF) supports the country in its effort to improve nutritional status of children, access to quality WASH facilities for children and ensure quality and uninterrupted delivery of comprehensive health services to children. The Islamic Development Bank (IsDB) supports health system strengthening with a focus health infrastructure.

Box 2. GFF support for the health sector in Sierra Leone

The GFF aims to accelerate progress on health and nutrition of women, children, and adolescents by 2030 through smart, scaled, and sustainable financing and thereby contribute to achieving UHC. The GFF-supported country-led process adds value through prioritization, coordinated financing, implementation at scale and learning. Specifically, for Sierra Leone GFF supports the following:

Developing a prioritized and costed investment case: The GFF supported the development of a costed investment case (IC) for Sierra Leone, and while prioritization was limited, a results framework was set up to monitor implementation. The Mid Term Review was just concluded, and the IC will be updated accordingly.

Supporting health financing and systems reforms: The IC will promote efficiency gains from supply-side readiness. By increasing the proportion of funding to PHC, the IC will contribute to improving allocative efficiency. The GFF supports strengthening health financing systems, including enhancing HMISs, RMET, M&E, and capacity building.

Co-financing this project and support for Advisory Services and Analytics (ASAs) in Sierra Leone. As in other countries, GFF partners with the World Bank and matches IDA financing of development projects on Reproductive, Maternal Neonatal Child and Adolescent Health and Nutrition. The GFF is co-financing this operation to the tune of US\$20 million consisting of a country grant of US\$10 million and EHS grant of US\$10 million. GFF provides support for multiple ASAs through World Bank Executed Trust Funds.

Strengthening of the country platform and convening financial and technical partners: The country platform provides the GFF with a channel to promote donor alignment around the IC.

F. Lessons Learned and Reflected in the Project Design

50. **Lessons learned from the EERP and the HSDSSP were considered in the design of this project.** The two projects, which supported delivery of EHS with establishment of NEMS, showed that the main constraints to project implementation is the country’s limited project management capacity in areas such as FM, procurement, and M&E. The project supported capacity building of IHPAU in the key technical areas to improve project management capacity. IHPAU now has all the core fiduciary functions of project management with adequate staffing level. Another constraining factor is the process of getting technical teams to support the procurement team in getting specifications and in evaluating bids in the procurement system. Formation of these teams was slow, and the right technical composition of these teams was not always possible. This led to delays in the procurement process on multiple occasions. With the support of a technical assistance, the procurement capacity has significantly improved.

51. **Lessons from the ongoing REDISSE and COVID-19 projects were also considered in the design of the project.** The two projects are supporting the country’s public health systems for epidemic preparedness and response. Through the two projects, the operational capacity of the national EOC and 117 call alert centers have been strengthened. To sustain the development outcome the design incorporated continued support to these two important institutions to enable them to support the fight against future epidemics.

52. **The project team also considered lessons from in-depth FM review of the COVID-19 project, HSDSSP**



and REDISSE. The objective of the in-depth review was to ascertain the extent to which project funds were used for the intended purpose and accounted for in accordance with financial reporting standards. It also considered how realistic the annual work plan (AWP) and budgets are, how effective budget monitoring is done on a regular basis, and how IPs are accounting for cash advances. The review showed significant delays in retiring and accounting for advances under the three projects. The assessment showed that substantial risks due to the huge sums of unliquidated advances and delays in processing liquidated advances. Most of the IPs of the projects' activities are attached to government institutions like the DHMTs where procurement structures are weak, financial record keeping is poor and are maintained manually, fiduciary capacity of staff is low, and internal audit is weak, albeit support is provided by a team from district councils (DCs).

53. **The lessons from the health sector Public Expenditure Review (PER, 2021) jointly conducted by the World Bank and the GoSL have been included in the project design.** The key findings of the PER relevant to the project are: low capital expenditure leading to inadequate availability of health infrastructure, which has a serious impact on the efficient delivery of health services; inadequate spending on essential drugs and medical supplies resulting in stockouts in health facilities; imbalance between spending on hospitals (secondary and tertiary care services) and primary health care; the DHMTs have weak PFM systems due to a lack in effective FM, procurement, internal audit, M&E, HMIS, and asset management capabilities. The PER recommends striking a balance between capital expenditure and recurrent expenditure to improve the state of health infrastructure; ensuring that funds are available for procurement of the needed supplies to health facilities; strengthening the capacity of DHMT fiduciary staff to effectively manage the health budget; and rationalizing allocation of the health budget in favor of PHC, with an eye toward achieving UHC.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

Institutional Arrangements

54. **The project will be coordinated by the Director of the DPPI at the MoHS.** As the project coordinator, the DPPI director will work under the leadership of the Chief Medical Officer (CMO) to inform MoHS about implementation progress. The DPPI director will be responsible for all communications, including policy dialogue with the World Bank, liaising with the World Bank's Task Team Leader (TTL) on all project related matters.

55. **The project will use the existing Project Steering Committee (PSC) under MoHS.** It is composed of the Ministry of Finance; MoHS; MAF; Ministry of Basic and Senior Secondary Education; Ministry of Technical and Higher Education; Ministry of Energy; Ministry of Local Government and Rural Development; Head of the Environment Protection Agency; Ministry of Planning and Economic Development; Ministry of Gender and Children's Affairs; Ministry of Social Welfare; and relevant non-state actors. The main function of the PSC is to provide oversight for project implementation. The committee will meet quarterly to review implementation progress and ensure that the project stays on course.

56. **District Councils (DCs) are the highest political entity at the district level. They are responsible for providing oversight in terms of the implementation of the GoSL's health strategy at the district level.** They will be major stakeholders in the implementation of the project activities. In collaboration with the Governance GP colleagues, the DC's fiduciary capacity will be strengthened to allow them to support the DHMTs in planning, budgeting, and expenditure management.



Implementation Arrangements

Central Level

57. **The DPPI director, as the project coordinator, will be responsible for supervising project's implementing partners.** The director coordinator will oversee the day-to-day implementation of project activities. As the project coordinator, the director will work closely with other implementing partners at the national and district levels as well as report on project implementation progress to the Minister of Health and Sanitation. The DPPI director coordinator will also be responsible for project-related communications, including policy dialogue with the World Bank.

58. **The IHPAU manages donor-funded health projects on behalf of MoHS.** The five major donors include GF, GAVI, Islamic Development Bank (IsDB), United States Centers for Disease Control and Prevention (CDC), and the World Bank. Each donor has its dedicated staff who work exclusively on the respective donor project. Linking the dedicated staff and the donors is the Team Lead (TL) who coordinates, provides oversight, and undertakes management of IHPAU. The World Bank projects dedicated staff consists of five team units (FM, Procurement, M&E, Internal Audit and Safeguards). Each unit is headed by a finance specialist, a procurement specialist, an M&E specialist, a senior internal auditor, and Environmental and Social (E&S) safeguards specialists. The specialists manage their respective teams and report to the TL. The TL reports to the coordinator who is the interlocutor between MoHS and the World Bank, communicating all project related issues to the World Bank's TTL on regular basis. The TL provides weekly updates of project implementation to the MoHS Executive Management Committee (EMC), which is headed by the Minister of Health and Sanitation. IHPAU will manage the project's fiduciary (FM, procurement, and internal audit), M&E, and E&S safeguards; prepare the AWP and budgets; provide fiduciary and E&S reports; collate technical reports from the MoHS IPs; and send quarterly progress reports to the PSC and the World Bank. IHPAU will hold weekly meetings to review implementation progress, resolve problems, and make course adjustments as needed. The TL will organize a bi-weekly technical meeting to update the World Bank's TTL of project implementation progress and project implementation challenges.

District Health Management Teams (DHMTs)

59. **DHMTs, in conjunction with the Health Committees of the DCs, in Kailahun, Bonthe, Falaba, Tonkolili and Western Area Rural District will be responsible for oversight and implementation of the hub-and-spoke service delivery model in their respective districts.** PIH will support the DHMTs led by the DMOs through mentoring and coaching to implement project activities in their districts. The DMOs will coordinate and ensure timely implementation of project activities. They will report implementation progress to the national project coordinator, who in turn, will communicate implementation challenges to the World Bank through IHPAU TL.

Partners in Health (PIH)

60. **PIH will fully implement the hub-and-spoke service delivery model in Kailahun District and provide mentoring and coaching to DHMTs to concurrently implement the same model in the Bonthe, Falaba, Tonkolili and Western Area Rural districts.** PIH will be responsible for the management, coordination, and implementation of all project activities under Component 1 in Kailahun District, while mentoring and coaching the DHMTs to carry out similar activities in the remaining four districts. An FM assessment has been conducted and it found that PIH meets the World Bank's minimum requirements for the administration of project funds under the World Bank's IPF policies and procedures. A procurement capacity assessment has also been completed. The assessment



showed that PIH meets the World Bank’s minimum requirements but will be required to hire a procurement officer specialist with public procurement experience. In addition, the World Bank legal team has conducted due diligence of PIH and determined that PIH is eligible to implement World Bank projects in accordance with the World Bank policy. The World Bank will sign a project agreement with PIH as an implementing entity with key performance indicators. PIH will also sign a cooperation agreement with the MoHS as the primary government counterpart. Through this agreement, PIH will fully implement the activities outlined in Component 1 in Kailahun district and provide mentoring and coaching to the DHMTs to implement these activities in the other four districts. MoHS will ensure that deliverables are produced according to agreed timelines. Table 3 provides a summary of project components and key implementing entities.

Table 3: Project Components and implementing entities

Project Components	Implementing Entities
1. Component 1: Improving Quality, Efficiency, and Effectiveness of Reproductive, Maternal, Newborn, Child Health and Nutrition Services	PIH, DHMTs, NEMS.
2. Strengthening National Level Systems	MoHS
<i>Subcomponent 2.1: Strengthening leadership and HRH capacity, PFM, HMIS, SLeSHI, pharmaceutical supply chain systems, and private sector participation</i>	MoHS
<i>Subcomponent 2.2: Strengthening epidemic preparedness, understanding NCD risks, and managing medical waste</i>	MoHS, MAF and Local Government
3. Project Management and M&E	
3.1 Project management	IHPAU, DHMTs, PIH
3.2 M&E and knowledge management	MoHS, IHPAU, PIH

B. Results Monitoring and Evaluation Arrangements

61. IHPAU will be responsible for the project level M&E system in line with the implementation structure and results framework. A dedicated M&E team has been put together at the central and district levels to ensure effective completion, and timely data collection, monitoring, and reporting that would help measure progress toward achievement of the PDO. The project has prepared a results framework that would be monitored by the M&E team. The M&E team will ensure that data captured are of quality and meet the information needs of health facilities, DHMTs, and MoHS. This will help decision-makers and clinicians understand and improve service utilization and quality of care. Independent midterm and end-line evaluations will be conducted to document the project’s impacts, achievements and lessons learned. The project will also strengthen the link between project level M&E and M&E unit at DPPI at MoHS. The results framework has been finalized at appraisal and an M&E manual is being prepared to serve as guide for monitoring project outputs and intermediate outcomes. The project implementation manual (PIM), to be adopted by project effectiveness, will detail the project’s results M&E arrangements, including data sources and reporting requirements.

C. Sustainability

62. **The GoSL has developed a UHC Roadmap, showing its commitment to achieving UHC through SLeSHI.** This GoSL espoused commitment enhances the likelihood of the project being sustained given the project’s focus on PHC. The MoHS participated in the project design and prioritization of activities. To improve institutional



sustainability, the project will support enhancing the management and technical capacity of the MoHS, IHPAU and DHMT staff to implement and monitor project activities. The proposed project will strengthen community ownership by engaging relevant community groups in managing service delivery units. In terms of financial sustainability, there have been sustained increases in the health budget as a proportion of the national budget from 7.5 percent in 2018 to 10.1 percent in 2019 and 11.0 percent in 2020. It is expected that the GoSL will continue to increase allocation to the health sector.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

Development impact

63. **The economic analysis of the QEHSSSP provides the justification for the economic and financial viability of the project.** The project's interventions are expected to generate direct and indirect benefits to target beneficiaries (women and children in Kailahun, Bonthe, Falaba, Tonkolili and Western Area Rural districts) through an increased utilization of improved, quality reproductive, maternal and child health and nutrition services. To ascertain the economic viability of the project, a cost-effectiveness analysis (CEA) was carried out comparing the project to the counterfactual of no project. Specifically, the CEA assesses the project's value for money based on the ratio of cost per disability-adjusted life years (DALYs)¹⁰ averted. The CEA shows a cost per DALY averted of US\$2.45, computed from the estimated project costs and expected results. Thus, QEHSSSP is deemed very cost-effective based on the common threshold decision standard for cost-effectiveness. That is, if the cost-effectiveness ratio of a project (cost per DALY averted) is lower than a country's GNI per capita, then the project is very cost effective. It is cost-effective if the ratio is less than three times the GNI per capita)¹¹. The estimated cost per DALY averted of US\$2.45 is less than Sierra Leone's per capita GNI of US\$490 (World Development Indicators, 2020). The QEHSSSP is therefore very cost-effective.

64. **Further analysis (sensitivity analysis) was conducted to test the discount rate considered for estimating the cost per DALY averted ratio.** This analysis shows that the estimated cost per DALY averted of the proposed project is not significantly different if the discount rate is changed. Increasing or decreasing the discount rate resulted in small changes in the cost per DALY averted ratio. These results indicate that relative to the alternative scenario without the project, the QEHSSSP's investments are worth undertaking (see annex 4 for a detailed analysis).

Rationale for Public Sector Involvement

65. **There are three main criteria related to public intervention in the health sector: economic efficiency criteria (public goods, externalities, catastrophic cost, and cost-effectiveness), ethical reasons (poverty, horizontal and vertical equity, and the rule of rescue), and political considerations (especially demands by the population).** This project fits within all the three criteria for public sector involvement in the health and social sectors. The project seeks to support the GoSL to achieve high levels of quality and increase access to the

¹⁰DALY is defined as the sum of the present value of future years of lifetime lost through premature mortality and the present value of future life adjusted for the average severity (frequency and intensity) of a mental or physical disability caused by a disease or injury (Fox-Rusby and Hanson 2001).

¹¹ Chatterjee, S., Laxminarayan, R. & Gosselin, R.A. (2016). Cost Per DALY Averted in a Surgical Unit of a Private Hospital in India. *World J Surg* 40, 1034–1040. <https://doi.org/10.1007/s00268-015-3376-y> (Accessed on July 4, 2021)



provision of health services, and to assist in doing so equitably. Through the hub-and-spoke service delivery model, the project would increase access to quality of care at rural health facilities, which serve the poorest and most vulnerable of the population that are underfunded by public investment and do not receive funding from any other sources.

Value Added of World Bank Group

66. **The World Banks' support is invaluable as it is perhaps the only institution with** (a) the convening power to coordinate among a large group of stakeholders; (b) the technical capacity to support such a proposed operation; and (c) the multisectoral country engagement, particularly at the level of the Ministry of Finance, to support key reforms towards the achievement of national objectives. Further, the World Bank's emphasis on the Human Capital Project, globally and in Sierra Leone, places it in a unique position to support the country's effort to put in place the condition to reap the benefits of the demographic dividend.

B. Fiduciary

(i) Financial Management

Financial Management (FM)

67. FM functions will be carried out by IHPAU's Finance Unit and the Finance Unit of PIH. The World Bank conducted an FM assessment to determine the adequacy of IHPAU and PIH's FM arrangements for the proposed project. The objective of the FM assessment was to determine whether these entities have acceptable FM arrangements in place. These include the Finance Units' system for planning and budgeting, accounting, internal controls, fund flow, financial reporting, and auditing. The arrangements are acceptable if they are considered capable of correctly recording all budgets, transactions, and balances, supporting the preparation of regular and reliable financial statements, safeguarding of assets, and are subject to auditing arrangements acceptable to the World Bank. The assessment was conducted in accordance with the World Bank's FM Policy and the Financial Management Manual for World Bank IPF Operations issued by the World Bank's Operations Policy and Country Services (OPCS) on September 7, 2021. The assessment concluded that the proposed IHPAU and PIH FM arrangements meet the World Bank's minimum requirements for management of projects funds under World Bank IPF Policy and Procedures.

68. **The FM performance risk rating for the other three World Bank projects managed by IHPAU was recently downgraded to moderately unsatisfactory because of ineffective management of advances given to IPs.** Additionally, the three projects' audited financial statements for the year that ended December 31, 2020 submitted by IHPAU, although submitted on time, were rejected by the World Bank because advances were not properly accounted for and the quality of supporting documentation was unacceptable.

69. **To prevent reoccurrence of such a situation, no advances will be provided to IPs by IHPAU under this project.** Any advance payment made from the Designated Account (DA) or Leone project operating bank account to IPs will be declared ineligible for financing. IHPAU finance unit will make payments of advances on behalf of the IPs. The IPs will focus primarily on the implementation of project activities. All in-cash payments for eligible expenditure (advances) will only be provided by IHPAU based on activity description and detailed budget approved by the project coordinator and after no objection from the TTL. Unexpended advances will disqualify a new request from obtaining the World Bank's no objection. A summary of advances to evidence such request



must be submitted to the World Bank along with the approved activity description and a detailed budget. IHPAU will open a pooled (IDA and GFF funds) US\$ denominated DA in a World Bank approved commercial bank.

70. **The disbursement methods available to the project are:** (a) Reimbursement; (b) Advance; (c) Direct Payment; and (d) Special Commitment. Supporting documentation required to accompany applications for (i) documenting expenditure related to advances made to the DA will include Statements of Expenditure in the format prescribed in the Disbursement and Financial Information Letter (DFIL) and (ii) requesting advances to the DA will include a six-month forecast included in the quarterly Interim Financial Report (IFR). The DFIL will also describe requirements for supporting documents for all other project disbursements.

71. **The assessment also concluded that PIH's FM arrangements meet the World Bank's minimum requirements for the management of projects funds under World Bank Policy and Procedure of IPF.** The assessment further concluded that PIH has satisfactory planning and budgeting, accounting, internal controls, financial reporting, and external auditing processes in place to support effective and efficient utilization of project resources.

72. **PIH will open a US\$ denominated segregated DA in a World Bank approved commercial bank in Sierra Leone.** The project will use report-based disbursements through the submission of six-month forecasts included in the IFRs to support applications for advances, and Statements of Expenditure in the format prescribed in the DFIL for documentation of expenditure. A forecast of the first six months expenditures will form the basis for the initial withdrawal of funds from the grant, and subsequent withdrawals will be based on the net cash requirements.

73. **The project will follow a cash basis of accounting and financial reporting and will submit, within 45 days of each GoSL's fiscal year, IFRs of the project activities.** At a minimum, the constituents of the IFRs will be: (a) a statement of sources and uses of funds by project withdrawal category for the reported quarter, year to date and cumulative period from project inception, reconciled to opening and closing bank balances; (b) a statement of uses of funds (expenditures) by project activity/component, comparing actual expenditures against budget, with explanations for significant variances for both the quarter, year to date, and cumulative period; and (c) DAs Reconciliation Statement. IHPAU will be responsible for the submission of the overall project IFR and PIH will submit an IFR in the same format to IHPAU within 30 days after the end of each quarter for IHPAU to submit the reports on time.

74. **The annual audited financial statements for the overall project, shall be submitted to IDA within six months of the end of the GoSL's fiscal year (i.e., by June 30 each year).** IHPAU will be responsible for the preparation of the financial statements in accordance with International Public Sector Accounting Standards (IPSAS) Financial Reporting Under the Cash Basis of Accounting using the submitted quarter four IFR, and any other information requested of PIH to complete the financial statements. IHPAU and PIH will retain documents and records and make them available for audit as required. The external auditors will conduct the audits on the project financial statements on terms of reference (ToR) agreed with the World Bank.

75. **Based on the assessment conducted, the overall FM risks were rated as 'High' before mitigation.** If the planned risk mitigation measures are properly implemented, the residual FM risk is anticipated to be rated as 'Substantial.' A detailed description of the FM assessment is included in Annex 3.

Procurement



76. **Procedures.** Procurement under the proposed project will be carried out in accordance with the World Bank 'Procurement Regulations for IPF Borrowers' (dated July 2016 and revised in November 2017, August 2018, and November 2020), the 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants' (dated July 1, 2016) and beneficiary disclosure requirements, as well as other provisions stipulated in the project Legal Agreements. Furthermore, the Sierra Leone 'National Public Procurement Act of 2016' will apply for tenders approaching national market taking into considerations the requirements of Clauses 5.3, 5.4, 5.5 and 5.6 of the Procurement Regulations for IPF Borrowers.

77. **Project Procurement Strategy for Development (PPSD).** A PPSD has been prepared by the GoSL and approved by the World Bank. The PPSD describes the overall project operational context, market situations, implementing agencies' capacities and identifies potential procurement risks and mitigation measures to achieve VfM and the PDOs. The PPSD also sets out the selection methods to be followed in the procurement of goods, works, and non-consulting and consulting services financed under the project. The underlying procurement plan will be updated at least annually or as required to reflect the actual project implementation needs and improvements in institutional capacity.

78. **Systematic Tracking of Exchanges in Procurement (STEP).** The project will use the World Bank's STEP, an online planning and tracking system that will provide data on procurement activities, establish benchmarks, monitor delays, and measure procurement performance. Use of STEP is mandatory for all procurement transactions subject to post and prior review under the project.

79. **Procurement risk.** The overall procurement risk associated with the project is **Substantial**; this rating is due to: (a) the limited capacity of IHPAU staff; (b) the inadequate number of staff available compared to the workload that the project will bring to the unit; (c) limited knowledge in the World Bank's Procurement Regulations and use of the World Bank's STEP; (d) poor procurement record keeping system; (e) inefficiencies and delays in procurement process; (f) insufficient competition in procurement, and (g) weak complaint redress system. To address these risks and weaknesses, mitigation measures and concrete action plans have been agreed with the GoSL, including, *inter alia*: (a) capacity building of IHPAU staff through regular procurement clinics, training and hiring of additional procurement officer for the project; (b) aggregation of small packages when feasible; (c) sensitization of private sectors to bid for public tenders; and (d) biannual reporting on all complaints received and actions taken.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

D. Environmental and Social Safeguards

80. **The project E&S footprint is generally localized, but the risk could be highly significant, especially with the inclusion of the medical waste management aspect.** The project will be processed under the environmental and social framework (ESF) and is therefore guided by the relevant environmental and social standards (ESSs).



There are risks associated with occupational health and safety (OHS) and managing Labor and Working Conditions (ESS2) of contractor workers; air and water pollution or contamination from project physical activities with specific reference to medical waste management, and unwise selection and sourcing of construction materials, inefficient use of water and energy covered under ESS3 on Resource Efficiency and Pollution Prevention and Management. community health and safety as it relates to traffic and accidents, transmission of infections focusing especially on COVID-19, labor influx and sexual exploitation and abuse (SEA) and sexual harassment (SH) issues, and issues related to pollution (ESS4 – Community Health and Safety), potential land acquisition for the construction of the CBWTF, water supply and sanitation facilities and construction and rehabilitation of the existing district hospitals (ESS5 - Land Acquisition, Restriction on Land Use and Involuntary Resettlement), and impacts on ecosystems, and wetlands and biodiversity as a result of project externalities, especially if civil works are conducted in the wet season (ESS6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources). These risks can be managed by the preparation and implementation of appropriate E&S safeguards instruments (ESS1 – Assessment and Management of Environmental and Social Risks and Impacts), and by the empowerment of the Recipient through capacity building and training to monitor and supervise the implementation of the project.

Environment Safeguards

81. **The project environmental risk rating is proposed as high** due to (i) inherent institutional constraints for safeguards implementation and supervision, albeit there is progress in capacity building with the recruitment of safeguards personnel and a technical advisor; and (ii) the risks associated with building and more importantly operating a CBWTF, which will be a pilot, and a first for the country, with the goal of cascading to a comprehensive nationwide medical waste management system. There is also the risk of monitoring and supervision restrictions and challenges for projects executed during the COVID-19 pandemic. The project activities include investment in sanitation and hygiene in community health facilities.

82. **At this stage of the project, the details of the CBWTF, such as the nature and quantity of waste and the type of treatment facilities, are being assessed.** The system will, however, constitute the entire waste stream from collection, storage, and transport, to treatment and disposal of biomedical wastes from hospital, health care centers and ancillary facilities from across the Greater Freetown or Western Area of Sierra Leone. Due to the geographical scale of the activity (Western Area), the scale of the operations is expected to be small. The types of wastes may include human and animal anatomical wastes; excess toxic drugs; items stained with contaminated blood and body fluids; microbial wastes and infected plastic gloves or broken bottles, sharps, placental wastes that emerge during the cleaning of CBWTF vehicles, equipment, and facility; and incineration ash and shredded plastic wastes generated at various stages of the waste stream. Treatment may comprise incineration, autoclaving, shredding, crushing or encapsulation of sharps, and placenta pits. In order to minimize exposure to toxic emissions, the project will prioritize non-incineration technologies for the treatment of medical waste.

83. **A scale incineration that would potentially form part of an integrated waste treatment process, as informed by the planned feasibility study on the CBWTF, the incineration ash and shredded materials would be disposed of in a section of the Kingtom landfill site in Freetown or the new landfill site to be constructed in the Western Area under the World Bank-funded Resilient Urban Sierra Leone Project (RUSLP)-P173676.** These details will only be available upon completion of a feasibility study and engineering design for which the ToR for consultancy services have been finalized. There are significant operational risks associated with the establishment of the CBWTF, such as possible exposure of health care workers, waste handlers, patients and the



community to infection, toxic effects, and injuries. There is also a risk of polluting the environment without adequate management of the waste stream. The risk level is further elevated by the COVID-19 pandemic transmission risks. Compounding these risks is inadequate human capacity and material resources nationwide to segregate and dispose of medical waste safely, including managing the CBWTF. These risks can be mitigated by exerting a comprehensive capacity-building effort, attracting local and international firms, or doing both.

84. **Although the districts (Kailahun, Bonthe, Falaba, Tonkolili, Western Area Rural districts) have been selected, the specific activities for each site have not been finalized. Once this is done, activity specific safeguards instruments will be prepared to inform an assessment of the risks/impacts, mitigation measures, and relevant regulatory instruments and institutional framework for safeguards implementation and monitoring.** For activities with substantial risk, such as the CBWTF, an environmental and social impact assessment (ESIA) will be prepared to provide comprehensive baseline data and impact assessment proportionate to the nature and scale of impact. For payments under Category (3) unless the Recipient has conducted a feasibility study to determine the type of technology, the prevailing baseline conditions, risk levels associated with the locations, and management and handling of the CBWTF; and the findings of said study are acceptable to the Association. An environmental and social management plan (ESMP) will be developed to manage all risks/impacts identified in the ESIA. For activities with moderate E&S impacts such as support to sanitation and hygiene at schools and CHCs, only an ESMP will be prepared to manage such impacts. Low risk activities will not require additional risk management. However, a system for monitoring will be put in place as part of project supervision and reporting.

85. **The choice of safeguards instruments to address E&S risks will be reviewed as additional details of the project and engineering designs are available.** A project Environmental and Social Management Framework (ESMF) has been prepared and publicly disclosed on October 25, 2021, to identify and manage risks associated with subprojects that have not been clearly defined and for which the targeted beneficiaries have not been identified. For subproject activities, risk assessment will be based on screening in accordance with the World Bank's Environmental and Social Risk Classification (ESRC). The safeguards instruments and engineering designs are interdependent; and so, the final ESMPs/ESIA and designs should be consistent with each other. The CBWTF ESMP will include an OHS plan. Preliminary assessments of potential medical waste treatment technologies and site for the location of the CBWTF have been done. However, site selection will be informed by the choice of technology, which prioritizes non-burn options. A detailed feasibility study will provide the information required to finalize both treatment technology and CBWTF site. This study will be financed by the project and will be a precondition for disbursement. Labor Management Procedures (LMP) have been prepared and annexed to the project ESMF. A SEP has been prepared separately and disclosed on October 19, 2021. The Recipient will also prepare an OHS Plan, a Community Health and Safety Plan, a GBV Action Plan and an Infection Control and Waste Management Plan (ICWMP) in line with GoSL's COVID-19 policy and directives, the World Bank's policy on COVID response and WHO guidelines as part of the overall ESMP prepared at implementation. The Recipient will submit the GBV action plan to the World Bank within two months of Board approval.

Social Assessment and Mitigation

86. **The project social risk rating is proposed as substantial. While the project is designed to have positive impact on women, girls, children, and the public in terms of improving health service delivery, reproductive, maternal, child and nutrition health services, it also has substantial social risks.** The project scope has been reviewed to target five districts (Kailahun, Bonthe, Falaba, Tonkolili and Western Area Rural) based on feasibility, equity, need to ensure delivery of health services to some of the most deprived districts. The reduced scope also



reduces E&S supervision complexity that was envisaged at concept stage. The project also addresses critical gender needs including GBV, not only as mitigating project-induced social risk management measure but goes beyond to respond to contextual GBV issue as a development challenge under Subcomponent 1.2. The main social risks associated with the project include investment in civil works under Component 1 (rehabilitation and/or construction of selected CHCs, integration of one stop centers in the routine health service delivery, and construction of solid waste disposal facility). It is expected that investment in the CHCs and one stop centers will be on existing health facilities to minimize need for a land acquisition and physical displacement of settlements. During construction, however, there might be temporary restriction of access to sites. Excavation and construction waste, noise, dust with potential for injuries and accidents to workers and community (health care workers, patients, and visitors to the health facility) are additional social risks. These risks will be localized and easily mitigated through the ESMP. Identifying suitable land for the right medical waste management technology will likely be challenging and will require inter-ministerial coordination and local level engagement. Land acquisition may also lead to restriction and displacement including existing health infrastructure (if land within an existing health facility is explored). The five District health centers have been identified but the exact facilities earmarked for rehabilitation is yet to be determined and the scale of impact is not known at this moment. . In line with the Environmental and Social Standard Five on Land Acquisition, Restriction on Land Use, and Involuntary Resettlement (ESS5), the project prepared and disclosed a Resettlement Policy Framework in-country and on the World Bank website on November 1 and November 8, 2021 respectively. The RPF details the processes for preparing site specific Resettlement Action Plan when project locations are eventually known. Potential risk of labor influx depending on the location of land if eventually identified, safety of workers and communities are likely to occur. An ESMF with a Labor Management Procedure has been prepared and disclosed both in-country and on the World Bank website on October 25, 2021. The ESIA process during implementation will assess these risks in detail and will include an OHS Plan, a Community Health and Safety Plan, and an ICWMP.

87. The risk of SEA/SH is rated low using the World Bank SEA/SH risk assessment tool. However, the country's GBV risk profile is substantial. Given that some of the investment will be implemented in deprived and vulnerable communities with increased income from construction/rehabilitation work, coupled with search for employment and procurement opportunities, the risk of SEA/SH may be heightened. The project will prepare a GBV Action Plan within two months of Board approval. The GBV Action Plan shall be implemented throughout Project Contractor code of conduct, workers training, community sensitization and Accountability and Response Framework will be part of the contractor ESMP for SEA/SH response. Further, it is necessary that social inclusion and disability risks and their impacts are assessed under the project as part of the ESIA, to ensure that the proposed infrastructure designs include accessibility features, as well as explore opportunities for persons with disability to take full advantage of project benefits, including employment and participation in consultation as appropriate.

88. Citizens Engagement (CE). Project implementation will require extensive coordination with different stakeholders at the national and local level with government agencies, DPs, academic institutions, CSO groups, beneficiaries etc. Most of these stakeholders have been consulted to inform the project design. The project will embed CE mechanisms into the design of the project, not only, to respond to the needs of various sociodemographic groups but also to ensure effective implementation and ownership. Consistent with ESS10, MoHS prepared and disclosed a SEP on October 19, 2021 that has systematically identified and mapped stakeholders to deliver relevant, right, and adequate information for different phases and different groups throughout the life of the project. Community sensitization and capacity-building activities will be carried out to engage the project's key stakeholders, including community leaders, women's groups, youth groups, schools, associations to support persons with disabilities, and other community-based and/or faith-based organizations.



Women and children are most severely affected by the disruption of routine essential health and nutrition services amid the global pandemic. Women, young people, elders, and persons with disabilities are also the most vulnerable in the aftermath of disease. Therefore, the proposed project will promote building community resilience and empowerment as a key element to staying healthy and minimize adverse health effects. Particular attention will be given to poor households and vulnerable people residing in geographically isolated and disadvantaged areas of the project. The project will also strengthen citizen awareness of their service quality entitlements to demand quality health services. It will also support independent data collection, monitoring, and beneficiary feedback of quality-of-service delivery by CSOs and communities themselves. MoHS has established a GRM linked to the Anti-Corruption Commission (ACC) GRM platform and will be used to receive and address expected complaints for the entire health portfolio.

89. **The Recipient's capacity to implement and monitor the World Bank E&S requirement has been enhanced over the years with the establishment of the safeguard's unit within IHPAU staffed with E&S specialists and an E&S advisor.** The main risk revolves around coordination with the procurement team and other IPs executing activities with E&S implications. These entities may not engage the safeguards team which could result in late site screening, delays in preparation of follow-up with E&S management plans and inadequate E&S provisions in procurement and contractual documents. The project will detail these coordination mechanisms in the PIM as well as joint engagement to clarify roles.

E. Gender

90. **Gender gaps remain across broad spectrum of issues in Sierra Leone, with the country ranked 155th in the 2020 Gender Inequality Index (GII) and classified in the Low Human Development Country Group.** While substantial gains have been made, gender inequalities remain salient. Sierra Leone ranks as the worst in the world in maternal mortality (717 per 100,000 live births), child mortality (94 per 1,000 live births), and infant mortality (56 per 1,000 live births). Several factors can impact access to and engagement in critical health services and exposure to disease among women in Sierra Leone, including limited social and economic autonomy, high rates of GBV, and poor health infrastructure to support safe deliveries among pregnant women. Women are also disproportionately impacted in the event of pandemics or national emergencies due to their vulnerable status. For example, while men do worse clinically once infected, women face a higher-than-average risk of COVID-19 infection, death, loss of livelihood, and GBV. As seen during the COVID-19 pandemic, any discontinuation or interruption in key health services for women, such as reproductive, maternal, newborn and child health and GBV, may exacerbate these suboptimal outcomes. Furthermore, gender identity intersects with other factors associated with inequity in health access and outcomes, including being poor, having limited access to education, and/or living in hard-to-reach or rural areas.

91. **The project targets women, adolescent and children as key beneficiaries and aims to improve their human endowments** by implementing a hub and spoke model, whereby spokes are facilities offering curative and preventive services and referral of pregnant women to nearby hub facilities. The project will also invest in holistic PHC systems focusing on equity, including upgrading infrastructure, equipment and supply of essential drugs and commodities, and improving health facility management to support among other outcomes, safe deliveries among pregnant women. Additionally, the project will help build community resilience and empowerment as key elements to staying healthy, minimize adverse effects among women, and strengthen the health sector response to GBV.



F. Climate Co-Benefits

92. **Sierra Leone is among the most vulnerable countries in the world to the adverse effects of climate change.** If poorly managed, the effects of climate change could be significant, particularly given the high dependence on agriculture and natural resources, combined with high poverty levels, unemployment, and environmental degradation. Key exposures include rising temperatures and extreme heat events, increasing rainfall and flooding risk, sea level rise, as well as air pollution which interacts with climate-exposures. Exposure risk has been assessed by the phase 1 Sierra Leone Climate and Health Vulnerability Assessment (CHVA) for both the current and future timescales (2030s and 2050s). Increasing temperatures and extreme heat can significantly affect human health and economic outcomes. Heat can exacerbate drought conditions, promote the growth of harmful algae bloom, encourage the spread of wildfires, and reduce solar panel efficiency¹². Moreover, very hot and humid weather is associated with numerous health issues, ranging from heat cramps, respiratory illness, cardiovascular disorders, and death; pregnant women and children are particularly vulnerable to heat-related illness. By the 2030s, average daily maximum temperatures in Sierra Leone will exceed >30°F throughout the year coupled with an increase in rainfall and in the intensity of rainfall events.¹³ Extreme rainfall events can lead to flash floods in urban areas, riverine flooding, and landslides. Health impacts of flooding include injuries, rodent or vector-borne disease, physical trauma, or drowning. Flood risk in Sierra Leone impacts the health of millions of people and disrupts the ability to deliver emergency and routine healthcare to large sections of the population primarily during the rainy season, May—November. Flooding risk includes the impact of sea level rise. Sea Level Rise (SLR) threatens coastal communities and the low-lying coast of Sierra Leone. Approximately 28 percent of the population live on or near the coast, many with livelihoods dependent on coastal resources. Rising sea levels not only have implications for population displacement in these communities but pose significant risks to water quality, incomes, food security and nutrition from the loss of coastal agricultural lands due to erosion, inundation, or salinization, and SLR' impact on coastal fish populations.

93. **Greenhouse gas (GHG) emissions are expected to rise in Sierra Leone due to continued urban population growth and increased consumption.** Between 2000 and 2015, total annual GHG emissions were estimated to have grown from 0.57 to 4.8 million tons of carbon dioxide equivalent (CO₂e) and projected to reach about 6.6 million tons in 2030. Improving the performance of waste collection and disposal is also very important in Sierra Leone and is essential to reduce emissions.

94. **Ambient and indoor air pollution pose a considerable risk to the health of Sierra Leoneans.** Mean annual PM_{2.5} exposure in 2017 was 21.6 micrograms per cubic meter. From 2012—2014 the country saw a decrease in PM_{2.5} concentrations to 17.7, only to rise to 22 by 2015. There are a multitude of contributing factors to air pollution rates including domestic sources, dust, and mining. Infrastructural development, industrial activities, and vehicular exhaust generate approximately 80 percent of carbon dioxide (CO₂) emissions. Unclean cooking fuels contribute substantially to indoor air pollution. In 2019, 98.8 percent of the population in the cities and 100 percent of rural populations had primary reliance on polluting fuels and technologies for cooking. While ambient and household air pollution are not part of the same global process as climate change, many of the causes and effects, particularly for human health are shared.

¹² High temperatures can affect solar panel efficiency, although some cell types do better than others in tropical regions (Osarumen et al., 2017; Peters et al., 2018) an aspect to consider as there exists a push for Sierra Leone to rely largely on mini solar grids and standalone solar panel for electrification of some communities. Further temperature increases likely under climate change could lead to load shedding and impact the country's energy policy.

¹³ United States Agency for International Development (USAID). (2016). Climate Change Risk Profile Sierra Leone. <https://www.climatelinks.org/sites/default/files/asset/document/2016%20CRM%20Fact%20Sheet%20-%20Sierra%20Leone.pdf> (Accessed on 20 September 2021).



95. **The climate exposures make the population of Sierra Leone, including in the project's target districts, vulnerable to several climate-related health risks.** These include heat related morbidity and mortality, flooding, changes to the prevalence of infectious disease, threats to food security and nutrition, and impacts on air quality and respiratory health. This project intends to address these climate-related health risks.

96. **The project intends to address climate change vulnerabilities, enhance climate resilience and adaptation, and mitigate GHG emissions through the following activities:** in terms of climate adaptation measures, **under Component 1 (US\$21 million IDA)**, a needs assessment will be conducted to determine staffing, supplies, equipment, and infrastructure needs. This assessment will ensure a lens on climate-resiliency through the Sierra Leone CHVA to ensure that all supplies/equipment procured follow energy-efficient and low-carbon measures. For instance, assessments of health care infrastructure and its vulnerability to severe weather events such as excessive rainfall that can lead to flooding will be conducted. Component 1 will also finance protocols, capacity building, and training for staff, including CHWs, teachers and NGOs, to use to respond in cases of climate-related events and for community sensitization on climate-related health impacts (i.e., heat stress, flooding, storms). Climate change resilience will be integrated in the curriculum and protocols to help raise awareness about the impacts of climate change on health and nutrition. This will include some training on measures to take in the event of extreme heat or drought to reduce the chances of dehydration and prevent deaths from heat waves that can aggravate chronic cardiovascular and respiratory diseases. Additionally, disease prevention and health promotion activities to raise awareness on health impacts of climate change will also take place in schools and universities (i.e., midwifery schools and medical schools). This will include climate change adaptation education and mitigation skills to empower students to participate and take up meaningful environmental activities and projects including the introduction of a training course for all health professionals, to embed effective responses to climate related health risks into their clinical practice. Provision of nutritional support and counseling from MSGs and caregivers to vulnerable patients meeting defined criteria on the impacts of heat stress and proper nutrition to improve dietary diversity will also be implemented. Climate-sensitive disease surveillance and strengthened case management capabilities and to enhance the ability of health services to better respond to future climate-related health impacts from extreme weather events will be implemented. This will include the integration of weather surveillance to improve the use of information for detecting, investigating, and responding to public health threats. Water infrastructure that will be installed will consider resiliency and damage that can be expected from storms and rising sea-levels to reduce health-related risks such as contamination. This will include assessing the location or design of water points and ensuring that they are flood proof such as deeper boreholes. This will ensure functionality and accessibility even after extreme weather events. Digitalization of the M&E system will also be implemented, particularly to reduce paper record loss during extreme weather events.

97. **Under Sub-component 2.1 (US\$5.5 million IDA)**, refresher courses will be implemented for MOHS senior management, which include climate and health challenges and the importance of addressing these issues through a resilience lens. Similar information that will be included in the curriculums under Component 1 will be used in these refresher courses such as heat stress, water availability and disease surveillance (i.e., vector-borne diseases). This sub-component will also support the digitalization of HMIS, which will help to reduce paper record loss in extreme weather events. **Under Sub-component 2.2 (US\$1.5 million IDA)**, capacity-building will also be supported for the NPHA that will be established through this project, which will specifically include climate-sensitive disease surveillance activities as described for Component 1. A STEPS survey will be implemented, which will also include an assessment on the influences of environmental changes and climate change in certain geographic locations, housing conditions, occupational risks, and access to services. This will also include an assessment on the impact of health and the measures the country can take to reduce the impact of climate



change on populations with underlying NCDs, particularly in climate-vulnerable regions. Moreover, the site selection of the eco-friendly bio-medical waste management facility will factor in climate-vulnerabilities to enhance resilience to climate-related flooding risks and ensure projected changes in sea level do not represent a future threat.

98. **In terms of climate mitigation measures, under Components 1 (US\$21 million IDA) and 2 (US\$10 million IDA), energy-efficient and low-carbon equipment will be purchased and climate-smart rehabilitation and/or construction will take place in public and private health facilities that will help to reduce the project's impact on the country's GHG emissions.** In Component 1, the equipment and supplies that will be purchased include energy-efficient lighting, light control measures (such as dimming and occupancy sensors), off-grid refrigerators, and energy-efficient water stations. Several health facilities will be retrofitted using climate-smart measures such as rooftop solar panels, thermal insulation, solar reflective roofs, and water and sewage systems will be repaired and maintained with a focus on flood-prone areas. Moreover, 14 fuel-efficient ambulances will be procured. Route optimization will be considered for these vehicles by adjusting routes for vehicles depending on weather and road conditions. This will improve fuel mileage and fuel efficiency of the vehicles. A hierarchy of preference will be used for these vehicles with emission free modalities such as cargo bicycles preferred for shorter and urban journeys (where ambient air pollution is also an issue) followed by all electric vehicles, then hybrid electric, with internal combustion powered vehicles only procured as a last resort where local supply chains for O&M are not yet sufficiently developed. The hub-and-spokes model enables patients to reach health services that are in closer proximity to their homes, which will reduce the use of transportation by beneficiaries leading to lower GHG emissions from cars, trucks, buses, and other modes of transportation through trip reduction. Moreover, the digitalization of the health system enables more efficient and sustainable systems such as the installation of sensors and digital automation technologies that monitor performance and avoid wasted energy use when facilities are not in use. The facilities that house these data will also be powered by renewable energy (i.e., solar). In **Component 2**, retrofitting of health facilities to enhance climate adaptation to heat, such as automatic door and window closures will also be supported. Moreover, there will be climate-sensitive construction of a bio-medical waste treatment center, which will use similar equipment and supplies as listed above. Fuel-efficient refrigerated vehicles will also be procured and will use the same route optimization and improve fuel-efficiency as noted in vehicles purchased under Component 1.

V. GRIEVANCE REDRESS SERVICES

99. **Communities and individuals who believe that they are adversely affected by a World Bank-supported project may submit complaints to existing project-level grievance redress mechanisms or the World Bank's Grievance Redress Service (GRS).** The GRS ensures that complaints received are promptly reviewed to address project-related concerns. Project affected communities and individuals may submit their complaint to the independent inspection panel at the World Bank, which determines whether harm occurred, or could occur, because of World Bank noncompliance 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 the World 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 independent inspection panel at the World Bank, please visit www.inspectionpanel.org.



VI. KEY RISKS

100. The overall project risk rating is **substantial**. The proposed project will build on the gains from the previous Health Service Delivery and System Support Project (P153064) and the COVID-19 Emergency Preparedness and Response Project (P173803). The basic elements of the technical design have been tried and tested and the socio-political environment is stable. High and substantial risks are outlined below.

- **The macroeconomic.** The risk of emerging or continuing external and/or domestic imbalances is moderate, and consequent macroeconomic effects will undermine the achievement of the PDO if they materialize. Risks stem from double-digit inflation, increased fiscal deficit, and contraction of the economy during the COVID-19 pandemic. The project might be affected by the availability and prices of key imported inputs and an uncertain outlook for the demand and financial viability of public services (especially utilities) due to fragile growth. These risks are external to the project. The macroeconomic situation will, however, be monitored for possible effects on the project. The project will implement a robust and efficient planning and management strategy to minimize any implementation delays as well as monitor market prices on regular basis. After all mitigation measures have been considered, the project macroeconomic residual risk is rated **moderate**.
- **Technical Design of project.** The Technical Design of the project is rated **Substantial**. The Hub-and-spoke organization design model, which arranges service delivery assets into a network consisting of an anchor health facility (hub) offering a range of services, complemented by lower-level facilities (spokes) is a new initiative to be implemented in Sierra Leone for the first time. The implementation of the model might require significant coordination effort in a low-capacity setting to succeed. However, with PIH involvement, there is a likelihood that the model would succeed as the NGO has demonstrated the ability to successfully implement this service delivery model in Rwanda and Lesotho and even in Sierra Leone. To mitigate this risk, PIH will fully implement the model in Kailahun District and provide mentoring and coaching to the remaining four districts within the project scope. After considering the mitigations measures, the residual risk is rated **moderate**.
- **The project's institutional capacity for implementation.** There is a high likelihood that insufficient institutional capacity for implementing and sustaining the operation or operational engagement may severely impact the PDO. Implementation arrangements are complex and span several agencies. Several different donor agencies are involved in the operation. The operation includes different levels of government and activities in different locations that are spread over a wide geographical area, which is not easily accessible. Working with IPs that have strong local experience in implementation of Maternal Child Health intervention through HSS. National policy framework such UHC Road Map, National Health and Sanitation Policy (NHSP), NHSSP, National Healthcare Financing, National NM&E strategy and EHS package. The project design is based on existing work in Sierra Leone that has been implemented by Kono DHMT and PIH and the comprehensive nature of the intervention is tailored to building institutional capacity in a weak health system context. After all mitigation measures have been considered, the project residual Institutional Capacity for implementation risks are rated **substantial**.
- **Fiduciary.** Fiduciary risks have a **substantial** probability of impacting the PDO in an adverse way. FM has drastically improved over the past years. However, the integrity of the procurement system, institutional capacity, controls, complaints mechanisms to ensure fair, transparent, and efficient procurement are weak. To mitigate these risks, the project will recruit additional Internal Auditor at IHPAU, adopt an appropriate



software for accounting, recruit a senior Grant Specialist and Finance Manager for PIH, provide FM training for IHPAU and PIH staff, establish a unified FM and reporting portal. The project will also hire a procurement Officer, provide continuous STEP training, and develop records and contract management systems. After all mitigation measures have been considered, the project residual fiduciary risks are rated **moderate**.

- **Sustainability and E&S.** The project environmental risk rating is proposed as **high** because work will be executed in the difficult situation of the COVID-19 pandemic, which would affect monitoring and supervision of works. There is also a history of failure by the Recipient to implement and supervise safeguards. Concerns also include the risks associated with building and operating a CBWTF, the fact that the CBWTF is a pilot, the first for the country, and that there is very limited capacity on the Recipient side to implement E&S requirements. To mitigate these risks, the project has established a functional E&S Safeguard Unit within IHPAU supported by a Technical Adviser and reporting turnaround and project monitoring has improved. The project will carry out a feasibility study to determine the optimal technology for the CBWTF which will in turn inform the location of the facility. The feasibility study will also cover operation and maintenance of the proposed facility. After all mitigation measures have been considered, the project residual Sustainability and E&S risks are rated substantial.
- **The COVID-19 pandemic.** The impact of the COVID-19 pandemic is **substantial**. The economy has contracted during this period and inflation is in double digits. Unavailability of public goods compounded by travel restrictions might negatively impact the successful preparation and implementation of the project. Due to the success of the robust public health measures put in place by GoSL, the COVID-19 pandemic impact on population has been minimal and economic activities are getting back on track. Internal travel restrictions have been lifted and we do not expect any negative impact on project preparation and implementation.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Sierra Leone

Sierra Leone - Quality Essential Health Services and Systems Support Project

Project Development Objectives(s)

The PDO is to increase utilization and improve quality of maternal and child health services in the selected areas.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
People who have received essential HNP services (Number)							
People who have received essential health, nutrition, and population (HNP) services (CRI, Number)		1,676,654.00	1,758,234.00	1,839,814.00	1,921,395.00	2,002,975.00	2,084,555.00
People who have received essential health, nutrition, and population (HNP) services - Female (RMS requirement) (CRI, Number)		1,110,493.00	1,160,194.00	1,209,896.00	1,259,597.00	1,309,299.00	1,359,000.00
Number of children immunized (CRI, Number)		1,060,233.00	1,102,642.00	1,145,052.00	1,187,461.00	1,229,871.00	1,272,280.00
Number of women and children who have received basic nutrition services (CRI, Number)		563,384.00	596,922.00	630,460.00	663,998.00	697,536.00	731,074.00
Number of deliveries attended by skilled health		53,037.00	58,670.00	64,303.00	69,935.00	75,568.00	81,201.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
personnel (CRI, Number)							
Pregnant women attended ANC4+ times by skilled health personnel in target districts (Percentage)							
Pregnant women attended ANC4+ times by skilled health personnel in target districts (Percentage) (Percentage)		64.00	67.00	70.00	73.00	75.00	77.00
Institutional Delivery Rate (Percentage)							
Institutional delivery rate in the target districts (Percentage) (Percentage)		57.00	60.00	65.00	70.00	75.00	80.00
Quality of care							
Average Score of Health Facility Quality of Care in the target facilities (Percentage) (Percentage)		44.00	47.00	50.00	54.00	60.00	64.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Improving quality, efficiency, and effectiveness of Reproductive, Maternal, Newborn, Child and Health							
Children 0-59 months admitted for SAM, that are cured of SAM in target facilities (Percentage) (Percentage)		32.00	38.00	45.00	52.00	60.00	70.00
Pregnant Women and Children under 5 years old who receive a CHW visit in target district		56,360.00	58,051.00	61,996.00	64,814.00	65,378.00	70,450.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
(Number) (Number)							
Deliveries referred from spokes to hubs in target districts (Number) (Number)		0.00	2,000.00	2,500.00	3,500.00	4,500.00	5,000.00
Children 0-11 months that received third dose of Penta vaccine in target districts (Percentage) (Percentage)		84.00	86.00	90.00	92.00	94.00	95.00
Couple-Year Protections (CYP) reached through project interventions in target districts (Number) (Number)		45,922.00	48,218.00	52,810.00	57,403.00	64,403.00	68,883.00
Maternal deaths reviewed in target districts (Percentage) (Percentage)		80.00	85.00	90.00	95.00	98.00	100.00
Health facilities in target district with staff trained to identify, refer, and provide clinical and/or psychosocial care for GBV (Number) (Percentage)		0.00	50.00	100.00	150.00	200.00	250.00
Component 2: Strengthening National Level Systems							
Health facilities submitting timely routine/HMIS reports according to national guidelines (Percentage) (Percentage)		82.00	90.00	92.00	94.00	96.00	98.00
Healthcare Waste treated at the Centralized Medical Waste Treatment Facility (Metric tons/year) (Metric tons/year)		0.00	0.00	0.00	547.50	547.50	547.50
Monthly facility management committee (FMC) meetings held in target districts		0.00	20.00	30.00	40.00	45.00	50.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
(Percentage) (Percentage)							
Essential Health service delivery monitored on a regular basis, with quarterly review of data to inform efforts to strengthen delivery (Number) (Number)		0.00	4.00	4.00	4.00	4.00	4.00
Grievances addressed each year (Percentage) (Percentage)		0.00	55.00	64.00	75.00	85.00	95.00
RMET completed and used annually, including data from the district level (Yes/No) (Yes/No)		No	Yes	Yes	Yes	Yes	Yes
Quarterly reports produced by the Unified financial management reporting system and reviewed at national level (Number) (Number)		0.00	1.00	4.00	4.00	4.00	4.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
People who have received essential health, nutrition, and population (HNP) services		Annually	DHIS2	Routine Reporting	DPPI
People who have received essential health, nutrition, and population (HNP) services - Female (RMS		Annually	DHIS 2	Routing Reporting	DPPI



requirement)					
Number of children immunized		Annally	DHIS2	Routine Reporting	DPPI
Number of women and children who have received basic nutrition services		Annally	DHIS2	Routine Reporting	DPPI
Number of deliveries attended by skilled health personnel		Annually	DHIS2	Routing Reporting	DPPI
Pregnant women attended ANC4+ times by skilled health personnel in target districts (Percentage)	Numerator: Number of women (ages 15-49 years) who were attended ANC 4+ times by any health personnel during pregnancy in target districts Denominator: Number of pregnancies expected among women (ages 15-49 years) in target districts.	Annually	DHIS	Routine Reporting	DPPI
Institutional delivery rate in the target districts (Percentage)	Numerator: Number of deliveries in all health facilities in target districts Denominator: Number of deliveries expected among women (ages 15-49 years) in target districts	Annually	DHIS	Routine Reporting	DPPI
Average Score of Health Facility Quality of Care in the target facilities (Percentage)	Average score on the following quality measures in target districts: i) Availability of priority drugs - All priority drugs ii) Availability of essential equipment (Blood pressure apparatus, Stethoscope,	Annually	Supportive Supervision Reports	Desk Review	DPPI



	Thermometer, Adult scale, Child scale, Light source, delivery bed) iii) Availability of diagnostic tests (HIV diagnostic test, Malaria diagnostic test, Urine test for pregnancy, Urine dipstick- protein, blood glucose test, Syphilis test, Haemoglobin test) iv) Existence of Minimum level of Clinical staff according to staffing norms				
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Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Children 0-59 months admitted for SAM, that are cured of SAM in target facilities (Percentage)	Numerator: Number of children admitted for severe acute malnutrition at selected health facility who are cured. Denominator: Number of children admitted for severe acute malnutrition at selected health facility	Annually	DHIS	Routine Reporting	DPPI
Pregnant Women and Children under 5 years old who receive a CHW visit in target district (Number)	Total, annual number pregnant women, lactating mothers and children under five years of age visited by a CHW, in target districts.	Annually	DHIS	Routine Reporting	DPPI



Deliveries referred from spokes to hubs in target districts (Number)	Cumulative number of deliveries referred from Spoke facilities to HUB CHCs	Annually	Administrative records	Project Facility Assessment Report	DHMT
Children 0-11 months that received third dose of Penta vaccine in target districts (Percentage)	Numerator: Number children (ages 0 -11 months) receiving all of the basic vaccinations in target districts, annually Denominator: Estimated number of surviving infants [aged less than 1 year] in target districts, annually	Annually	DHIS	Routine Reporting	Stats SL/DPPI
Couple-Year Protections (CYP) reached through project interventions in target districts (Number)	CYP is calculated summing the product of the quantity of each FP commodity distributed/provided to client by a conversion factor for each method during a given period.	Annually	DHIS	Routine Facility-Based Data Collection	DPPI
Maternal deaths reviewed in target districts (Percentage)	Numerator: Total number of Maternal Deaths Audited (reviewed) in health districts Denominator: Total number of maternal deaths reported in target districts.	Annually	DHIS	Routine Reporting	DPPI
Health facilities in target district with staff trained to identify, refer, and provide clinical and/or psychosocial care for GBV (Number)	Cumulative health care facilities with staff that passed the post-assessment exam following the training course on GBV.	Annually	Supportive Supervision Reports	Desk Review	DHMT
Health facilities submitting timely routine/HMIS reports according to national guidelines (Percentage)	Numerator: Number of health facilities (PHUs, DH, etc.) submitting timely	Annually	DHIS	Routine Reporting	DPPI



	monthly reports (to the districts). Denominator: Total number of health facilities expected to report in the time period				
Healthcare Waste treated at the Centralized Medical Waste Treatment Facility (Metric tons/year)	Numerator Total Number of Infectious Waste generated per facility per Kg per patient per day + Number of Sharps Waste Generated per facility per Kg per patient per day. Denominator: Total number of waste collection days	Annually	Supportive Supervision Reports	Desk Review	DHMT/MS/IHPAU
Monthly facility management committee (FMC) meetings held in target districts (Percentage)	Numerator: Number of monthly FMC meeting held by FMC in targeted districts, each year Denominator: Total number of expected monthly FMC meeting to be held in targeted districts	Annually	Supportive Supervision Reports	Desk Review	DPPI
Essential Health service delivery monitored on a regular basis, with quarterly review of data to inform efforts to strengthen delivery (Number)	Number of times that routine (monthly) Monitoring of Essential Health Services (mEHS) reports are reviewed by the Country Platform	Annually	Programme Reports	Desk Review	DPPI
Grievances addressed each year (Percentage)	Numerator: Number of grievances reported and addressed	Annually	Programme Reports	Desk Review	Grievance Redress Team



	Denominator: Total number of grievances reported				
RMET completed and used annually, including data from the district level (Yes/No)	RMET data produced (including data from at least target districts), and reviewed annually by the MoHS Budget Committee during budget preparation	Annually	RMET Reports/Meeting Reports	Desk Review	DPPI
Quarterly reports produced by the Unified financial management reporting system and reviewed at national level (Number)	Number of quarterly reports produced by unified reporting system and reviewed at national level at DFR	Quarterly	Financial Reports	Desk Review	DPPI



ANNEX 1: Implementation Arrangements and Support Plan

Implementation Arrangements

1. **At the central level, the DPPI director, as the project coordinator, will be responsible for supervising project's implementing partners.** The director coordinator will oversee the day-to-day implementation of project activities. As the project coordinator, the director will work closely with other implementing partners at the national and district levels as well as report on project implementation progress to the Minister of Health and Sanitation. The DPPI director coordinator will also be responsible for project-related communications, including policy dialogue with the World Bank. The DPPI director will be supported by IHPAU, which will manage the project's fiduciary (FM, procurement, and internal audit), M&E, and E&S safeguards; prepare the AWP and budgets; provide fiduciary and E&S reports; collate technical reports from the MoHS IPs; and send quarterly progress reports to the PSC and the World Bank. At the District level, the DHMTs, in conjunction with the Health Committees of the DCs, in Kailahun, Bonthe, Falaba, Tonkolili and Western Area Rural District will be responsible for oversight and implementation of the hub-and-spoke service delivery model in their respective districts. The project implementing entity, PIH, will fully implement the hub-and-spoke service delivery model in Kailahun District and provides mentoring and coaching to DHMTs led by the DMOs to implement similar project activities in their districts. The DMOs will coordinate and ensure timely implementation of project activities. They will report implementation progress to the national project coordinator, who in turn, will communicate implementation challenges to the World Bank through IHPAU TL.

Strategy and Approach for Implementation Support

2. **The proposed implementation plan carefully considers the dual capacity of the project implementation and fiduciary arrangements.** The project's technical implementation unit will be placed within the MoHS, and the fiduciary management will be with the IHPAU. IHPAU has considerable expertise in managing funds and implementing projects of five key donors, the World Bank, GF, GAVI, ISDB, and the US CDC. The project will provide support to strengthen technical capacity in procurement, FM, M&E, internal audits, governance, and anti-corruption, at national and the district levels. The World Bank's implementation support will consist of the following:

- Capacity-building activities to strengthen the ability at the national and district levels to implement the program, covering the technical, fiduciary, and social and environmental dimensions.
- Provision of technical advice and implementation support geared toward the attainment of the PDOs.
- Ongoing monitoring of implementation progress, including regularly reviewing key outcome and intermediate indicators, as well as identifying bottlenecks.
- Monitoring risks and identification of corresponding mitigation measures.
- Close coordination with other donors and DPs to leverage resources, ensure coordination of efforts, and avoid duplication.

3. **An annual fiduciary review will be conducted for the project; adequate budget has been allocated for this review.** This review will be supplemented by on-site visits done by the World Bank's fiduciary staff at least



twice a year. The project will rely on annual audit reports to be produced by an independent audit firm. In addition, desk reviews will be done for audit, financial, procurement and any other reports received during the financial year. Specific, in-depth reviews may also be commissioned by the World Bank's fiduciary team whenever deemed necessary.

4. **Additionally, through PIH the project will provide technical support to the DHMTs to implement the hub-and-spoke model** in the selected districts. The technical support aims to develop local capacity to lead the implementation of the hub-and-spoke model in the medium and long terms (Table A1.1).



Table A1.1: Implementation Support Plan

Time	Focus	Skills Needed	Resource Estimate
First twelve months	Needs Assessment on staffing, supplies, systems, and social support gaps for the five selected districts	PIH Experts	
	Development of instruments for Hub-and-Spoke model and Capacity building	PIH experts	
	Capacity building on FM, procurement, internal audit and safeguard implementation and compliance	FM, Procurement and Safeguards staff, and consultants	
12-48 months	Implementation support	Missions to the five districts	US\$150,000 each subsequent year

Table A1.2: Skills Mix Required

Skills Needed	Number of Staff Weeks (SW)	Number of Trips	Comments
Task team leader	15 SWs annually	Field trips as required	CO* based
Public Health Specialist	10 SWs annually	Field trip as required	Washington/CO based
Procurement Specialist	Five SWs annually	Field trips as required	CO based
FM Specialist	Five SWs annually	Field trips as required	CO based
Environmental and Safeguard Specialist	10 SWs annually	Field trips as required	CO base
Operations Analyst/ Officer	6 SWs annually	Field trip as required	Washington based
Administrative Support	10 SWs annually	Field trips as required	Washington and CO based

*Country Office



Box A1.1: PIH Handholding Implementation Support

PIH will ensure that the hub facilities in Kailahun are well staffed, rehabilitated with the right equipment and supplies. It will recruit well-trained, qualified staff in sufficient quantity to respond to need. These staff, among others, include clinical managers, gap-filling clinical staff to meet GoSL staffing norms (SECHN, midwives etc.); laboratory, pharmacy, operations staff, M&E officers, and CHWs. Targeted training, mentorship and on-the-job coaching will be an integral part of the routine service delivery. The objective is to build the capacity of the DHMTs and facility managers in clinical management.

PIH will also ensure that the tools and resources needed for service delivery and administration, laboratory supplies, consumables, medicines, supplies, medical and lab equipment are adequately provided to support routine service delivery.

Clinical staff must be able to provide services in an environment that is conducive for effective service delivery. For that reason, PIH will provide safe and appropriate spaces with capacity to serve the needs of the hubs. This will include rehabilitation and upgrading of the facilities to the level of standard required for efficient service delivery. A comprehensive design aimed at optimizing patient flow and ensure effective infection prevention and control (IPC), including maintenance water supply, electricity and fuel will be developed.

In terms of systems, PIH will ensure that referrals between hubs, spokes, CHWs and district hospitals are strengthened. It will strengthen M&E, pharmacy management, medical records, quality improvement, and facility operations and maintenance and CHW systems.

In support of routine service delivery, knowledge sharing, and learning will be an integral part of the implementation of the hub-and-spoke service delivery model. Kono district will be used as the learning center where all the DHMTs and clinical staff will undergo periodic training.

In Bonthe, Tonkolili, Falaba and Western Area Rural, PIH will adopt the same approach by providing mentoring and coaching to the DHMTs to enable them to implement the hub-and-spokes model service delivery in those districts. The selected hubs will be staffed with qualified staff, equipped, with the equipment and supplies. They will also be renovation to ensure to create the enabling environment for effective and efficient service delivery. The DHMTs and facility managers of the four districts will also be part of the knowledge and learning programs at Kono.

Dissemination of results and outputs will be an integrated into project implementation. PIH will share packages of results and lessons from the project and organize technical working groups meetings to discuss project related issues. It will codify key elements of the model implementation, including tools and SOPs and make the available to MoHS for wider use. PIH will convene learning collaboratives with each District an MoHS.



Annex 2: Fiduciary Arrangements

(i) FM and Disbursements Arrangements

1. **FM assessments of the IHPAU and PIH** were conducted in accordance with World Bank IPF Policy and as complemented with the FM guidelines outlined in the FM Manual for World Bank IPF Operations issued by the World Bank’s OPCS on September 7, 2021.
2. **The objective of the assessments** was to determine whether: (a) IHPAU and PIH have adequate FM arrangements to ensure that project funds will be used for the intended purposes in an efficient and economical way; (b) the project’s financial reports will be prepared in an accurate, reliable, and timely manner; (c) the entities’ assets will be safeguarded; and (d) the audit arrangements are subject to be acceptable to IDA.
3. **The overall FM risk for the project** at preparation is assessed as **high**, but with the expected risk mitigation measures when adequately implemented, the residual FM risk is rated as **substantial**.
4. **Country issues that would potentially impact project FM include the PFM environment.** Sierra Leone’s PFM arrangements were assessed in 2018 using the Public Expenditure Financial Accountability (PEFA), Performance Measurement Framework (PMF). According to the assessment, Sierra Leone has maintained its progress since the PFM reform started with the Institutional Reform and Capacity Building Project (IRCBP) in 2004. The weaknesses in some areas impact on fiscal discipline (the ability to stay on track), on strategic allocation of resources (alignment with the Agenda for Prosperity), and on efficient delivery of services. The PFM Reform Strategy 2018–2021 seeks to improve efficiency, effectiveness and transparency of revenue generation and expenditure management and to provide the basis for macro stability, strategic allocation of resources, delivery of vital goods and services to the country and strengthen accountability between the State and citizens.
5. **The risk rating summary** presented below is based on the assessment of country risks and project’s proposed FM arrangements (Table A2.1).

Table A2.1: Risk Rating Summary

	Risk	Risk rating	Risk mitigating measures	Effectiveness Condition (Yes or No)	Residual Risk rating
INHERENT RISKS					
1	Country level Weaknesses in legislative scrutiny, low human capacity, declining revenues and energy challenges are affecting timely and adequate intergovernmental fiscal transfers.	H	Efforts are being made to help GoSL substantially resolve and enhance revenue management framework in the medium term. The PFM Improvement and Consolidation seeks to address the human capacity issues including FM capacity and improve process aspects.	No	H
2	Entity level The political arm of the entity and management may unduly interfere	H	An independent PFM unit with officers paid by the project will manage the fiduciary aspects of the project to ensure	No	S



	with or override project FM controls.		<p>independence.</p> <p>An independent external audit will be carried out annually under the project.</p> <p>The design of the project will include an enhanced accountability framework to ensure control of soft expenditures from possible abuse.</p>		
3	<p>Project level</p> <p>Weak FM capacity at the ministry could result in slow execution of the project and delayed reporting could impact on progress.</p>	H	<p>IHPAU will be operated by qualified personnel that will handle the day-to-day management for the GoSL.</p> <p>The performance of the staff hired in the area will be reviewed once annually to act as a basis for renewal of their individual contracts.</p>	No	S
CONTROL RISKS					
4	<p>Budgeting</p> <p>Budget and AWP preparations may be delayed and may not be comprehensive. Risk of cost overruns and adverse variations in expenditure could arise due to potential slow implementation and padding of the related unit costs of goods and services entailed in the implementation.</p>	H	<p>The project budget has been finalized.</p> <p>The AWP would be submitted annually before implementation starts for review by the World Bank team which would ensure it is realistic and unit cost estimates are reasonably based on industry and global experiences gathered in some jurisdictions that have undertaken similar operations and cross-check the same with the local market.</p> <p>Efforts (including a budget clinic) will be made to facilitate effective coordination between IHPAU and the technical component leads.</p> <p>Budget execution reporting through quarterly IFRs will be routinely monitored by IDA with variations in unit costs tracked to ensure major deviations are followed up and investigated.</p> <p>The Budget Office will monitor budgeted activities to ensure effective use of budgets.</p>	No	S
5	<p>Accounting</p> <p>Government Accounting System is not yet installed at the ministry.</p> <p>The manual accounting system is not generating reliable, accurate and</p>	H	<p>Establish the unified FM and reporting portal aligned with the government system and conduct training based on a detailed User Guide.</p> <p>The World Bank's team will provide</p>	No	S



	timely accounting information that is acceptable to the World Bank.		support to relevant project staff at IHPAU.		
6	<p>Internal control</p> <p>Internal control (IC) project funds are not being used for intended purposes because of inadequate internal control by management and lack of control measures pertaining to soft expenditures and usage of executive override.</p> <p>This may give rise to non-compliance with internal control procedures.</p>	S	<p>Adequate internal control over the disbursement and accountability of funds for eligible expenditures will be further strengthened by the internal audit oversight on the project at IHPAU. The internal auditors will be required to generate periodic internal audit reports which should be shared with relevant stakeholders including the World Bank. The internal control will also be documented in the FM manual for the project.</p> <p>Internal and external auditors would be expected to clearly identify and report any cases of breach of internal control procedures by the project management.</p> <p>The staff complement of the Internal Audit Unit of IHPAU will be enhanced and the approved annual internal audit plans will be submitted to the World Bank.</p>	No	M
7	<p>Fund flow</p> <p>Possible delays in processing withdrawal applications are leading to problems in honoring payments to third parties.</p> <p>Submission of withdrawal applications has been delayed.</p>	M	<p>The IHPAU will be responsible for preparing and submitting withdrawal applications, and acceptable service standards for settlement of bills will be established.</p> <p>IDA funds will be disbursed through the US\$-denominated DA to be opened by the IHPAU.</p> <p>Simplified flow of fund arrangements will be included in the PIM.</p>	No	L
8	<p>Financial reporting</p> <p>There are delays in the preparation and submission of unaudited IFRs and/or unreliable IFRs submitted.</p>	M	<p>IFRs shall be submitted to the World Bank within 45 days after end of each calendar quarter. The content of the IFR will include sources and uses of funds, uses of funds by category, World Bank accounts reconciliation, and a schedule of amounts drawn from the grant.</p>	No	L
9	<p>Auditing</p> <p>There are delays in the submission of audit reports and a lack of timeliness of management follow-up on audit issues.</p>	M	<p>The audit ToR will be agreed, and a qualified and acceptable auditor appointed with relevant input of the Audit Service Sierra Leone (ASSL).</p> <p>Continuous satisfactory performance of auditors will be the basis for ongoing</p>	No	L



		<p>engagement.</p> <p>The audit would be done in accordance with International Standards on Auditing. The audited financial statement is expected to be submitted to the World Bank no later than six months after the end of each fiscal year. The ToR for the external auditors must be cleared by the World Bank.</p> <p>The World Bank will liaise closely with implementing agencies to ensure that management takes corrective actions on identified weaknesses.</p>		
OVERALL RISK RATING		H		S

H — High, S — Substantial, M — Moderate and L — Low.

Project Risk Assessment and Mitigation

6. This section presents the results of the risk assessment and identifies the key FM risks of IHPAU and the related risk mitigating measures.

7. **Planning and budgeting.** The AWP and budget will be prepared and approved based on the policy guidelines and strategy planning, which will be laid out in the PIM and consistent with the provisions of the PFM Act 2016. The budget will be activity-based and in line with the cost tables of the project. The AWP and budget is expected to be prepared in a participatory way and will be approved before the new financial year begins. Actual expenditure, including a comparison to budget, will be monitored during project implementation using unaudited interim financial reports. IHPAU will ensure timely preparation, review, consolidation, and approval of the annual work program budget.

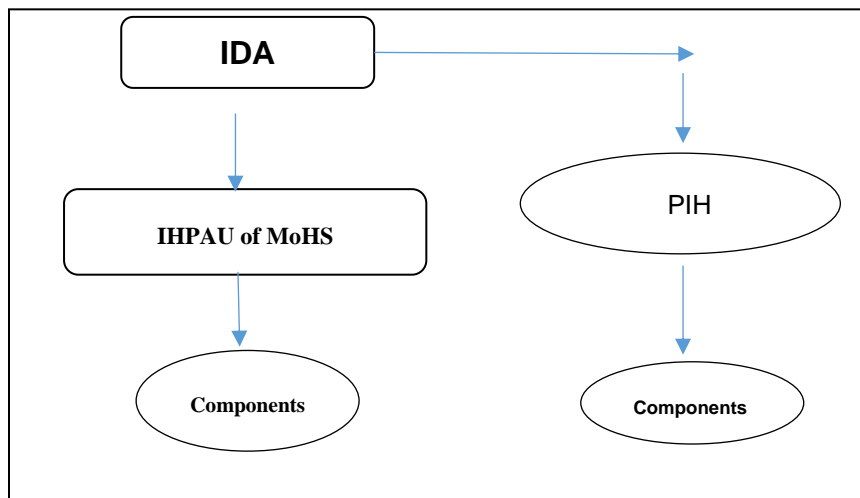
8. **Accounting Policies, System and Procedures.** PIH Sierra Leone’s Accounting Department team includes a Financial Director, a Financial Controller, a Financial Analyst, two Finance Managers (for their two Sierra Leone sites), a Grants Manager with significant experience in managing donor funded projects, a payroll officer and five finance officers/cashiers. PIH-SL would plan to hire additional qualified finance staff to support this project. The Accounting Department of PIH will use Serenic, an Enterprise Resource Planning (ERP) solution designed specifically for international non-governmental organizations and will set up and maintain a ledger specifically for this project in such a way as to be able to provide reports on expenditure by project subcomponent and withdrawal category (unless there is only one category). The system should also permit reporting of the DA bank transactions, expenditures that are fixed asset including register of such assets, and a contract register.

9. **The accounting systems will contain:** (a) a chart of accounts and a coding system capable of capturing transactions classified by project components and disbursement categories as well as against budget lines; (b) use of the cash or modified cash method of accounting; (c) a double entry accounting system; and (d) the production of annual financial statements and quarterly unaudited IFRs in a format acceptable to IDA.



10. The accounting policies and procedures manuals will include the project financial transactions procedures at each of the implementing agencies. The manuals will contain the necessary internal controls including internal checks and segregation of duties.
11. **Internal Audit and Control.** The Internal Audit Unit of IHPAU; and the Financial Planning & Analysis (FP&A) and Grants Management & Compliance (GM&C) units of PIH will carry out periodic internal audit reviews of activities implemented and share copies of their reports with the World Bank alongside IFRs.
12. **Duties and compliance.** Segregation of duties, and full compliance with the provisions of the PIM, especially as pertaining to internal control aspects, will remain a key ingredient in the implementation of the expenditure processing activities at the Finance Unit of PIH and the Finance Unit of IHPAU and the implementing and executing agencies during the life of the project.
13. **Governance and Anti-Corruption.** The World Bank’s Anti-Corruption Guidelines (“Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants”, dated October 15, 2006 and revised in January 2011) apply to this operation. Sections of these guidelines, especially those relating conflict of interest, procurement and contract administration monitoring procedures, procedures undertaken for replenishing the DA and use of the Project’s asset shall be provided as an annex to the Project’s Financial Procedures Manual. Additional mitigation measures will include advocating good governance, close monitoring, and spot checks by the internal audit units of the implementing entities, as well as enhanced social responsibility by the GoSL and implementing entities.

Figure A2.1: Flow of Funds



14. **Designated Accounts (DA).** To facilitate funds flow to the GoSL, a pooled DA will be opened in US Dollars in a commercial bank acceptable to the World Bank and managed by The Finance Unit of the IHPAU. The account will pool financing provided by IDA and the GFF.
15. PIH will maintain segregated DA into which the World Bank will provide advances that will be used to finance project activities that will be implemented by PIH.



16. **Disbursement Arrangements.** The project provides for the use of ‘advances, reimbursements, direct payment, and special commitments’ as applicable disbursement methods, and these will be specified in the DFIL. Statement of expenditures (SOEs) will be required to support applications to document expenses paid for from advances and requests for further advances to the DAs will require submission of a six-month cash forecast included within the IFR. Supporting documentation will be retained by the implementing agencies for review by the IDA missions and external auditors.

Table A2.2: Eligible Expenditures of IDA Grant

Category	Amount of the Grant Allocated (expressed in SDR)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, consulting services, Operating Costs and Training for the Project (except for Parts 1(a); 2.2(c); and 3 of the Project).	6,693,500	Such percentage of disbursement as the Association may from time to time determine based on the approved Annual Work Plan and Budget
(2) Goods, works, non-consulting services, consulting services, Operating Costs and Training for Part 1(a) of the Project.	10,843,500	
(3) Goods, works, non-consulting services, consulting services, Operating Costs and Training for Part 2.2(c) of the Project.	2,317,800	
(4) Goods, works, non-consulting services, consulting services, Operating Costs and Training for Part 3 of the Project.	7,086,000	
(5) Emergency Expenditures for Part 4 of the Project	0	
(6) Unallocated	1,359,200	100%
TOTAL AMOUNT	28,300,000	

Table A2.3: Eligible Expenditures of GFF Grant

Category	Amount of the GFF EWEC Grant Allocated (US\$)	Amount of the GFF WCA Grant Allocated (US\$)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, works, non-consulting services, consulting services, Operating Costs and Training for the Project (except for Parts 1(a); 2.2(c); and 3 of the Project).	1,700,000	2,230,000	Such percentage of disbursement as the Association may from time to time determine based on the approved Annual Work Plan and Budget
(2) Goods, works, non-consulting services, consulting services, Operating Costs and Training for Part 1(a) of the Project.	5,280,000	6,000,000	



Category	Amount of the GFF EWEC Grant Allocated (US\$)	Amount of the GFF WCA Grant Allocated (US\$)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(3) Goods, works, non-consulting services, consulting services, Operating Costs and Training for Part 2.2(c) of the Project.	1,020,000	1,770,000	
(4) Goods, works, non-consulting services, consulting services, Operating Costs and Training for Part 3 of the Project	2,000,000	0.00	
TOTAL AMOUNT	10,000,000	10,000,000	

17. **Retroactive Financing.** Total project cost is US\$60 million – US\$40 million from IDA allocation and US\$20 million from GFF. Retroactive financing of an aggregate amount not to exceed SDR 70,750 for payments made on or after October 22, 2021, for Eligible Expenditures under Category 2 (see Financing Agreement) to support PIH to undertake initial project implementation activities, including consulting services and operating costs under the project.

18. **Financial Reporting Arrangements.** The Finance Unit of IHPAU will be responsible for the preparation and submission of quarterly Interim Financial Reports for the project, to be submitted within 45 days after the end of the quarter to which they relate. It will also be responsible for the preparation of the annual financial statements for the fiscal period to which they relate and having them audited. The information in these reports will be clearly reconciled to the trial balance/general ledger reports from the accounting systems used for the Project. PIH will prepare financial reports in respect of the activities it will implement and will forward same to the Finance Unit of IHPAU for consolidation of the reports and submission to the World Bank.

19. **The following quarterly IFRs and annual Financial Report will be produced:** (a) a statement of sources and uses of funds for the reported quarter and cumulative period from project inception, reconciled to opening and closing bank balances; (b) a statement of uses of funds (expenditures) by project activity/component and expenditure category, comparing actual expenditures against budget, with explanations for significant variances for both the quarter and cumulative period. The Financing Agreement will require the submission of audited financial statements for the overall project to the World Bank within six months after the end of each financial year. These Financial Statements will comprise: (a) a Statement of Cash Receipts and Payments, which recognizes all cash receipts, cash payments, and cash balances controlled by the entities responsible for project implementation. (b) The Accounting Policies Adopted and Explanatory Notes. The explanatory notes should be presented in a systematic manner with items on the Statement of Cash Receipts and Payments being cross-referenced to any related information in the notes. Examples of this information include a summary of fixed assets by category of assets and a summary of Withdrawal Schedule, listing individual withdrawal applications; and (c) a Management Assertion that IDA funds have been expended in accordance with the intended purposes as specified in the relevant World Bank Financing Agreement.

20. **Indicative formats of these statements will be developed** in accordance with fiduciary requirements and agreed with the Country FM Specialist.

21. **External Audit.** The ASSL is by law responsible for the audit of all government finances and projects.



However, in view of the prevailing capacity constraints, it is possible that the ASSL could outsource such service to a private firm of auditors with qualifications and experience acceptable to the IDA.

22. **PIH will prepare and submit** to the Finance Unit of IHPAU the management accounts in respect of the activities PIH implements.

23. The project financial statements will be audited annually in accordance with International Standard on Auditing (ISA) by independent auditors acceptable to IDA based on ToRs acceptable to IDA as above annotated. The auditors should be appointed prior to the end of the first audit period to allow the auditors able to submit the audit report within the due date. The audited financial statements will be submitted to IDA within six months after the end of each fiscal year. The cost of the audit will be financed from the project proceeds.

24. **Fraud and Corruption.** Inefficient service delivery due to poor governance practices and weak PFM environment is an inherent issue. Possibility of circumventing the internal control system such as colluding practices, bribes, abuse of administrative positions, mis-procurement among other considerations are critical risks that may arise. Other internal control incidences that may expose the project to fraud and corruption include but not limited to (a) late submission of supporting documents; (b) poor filing and records; (c) lack of work plans and or budget discipline; (d) unauthorized commitment to suppliers; and (e) bypassing budget and expenses vetting procedures. The project shall mitigate these potential fraud and corruption related risks through (i) strengthened project monitoring; (ii) specific aspects on corruption auditing will be included in the ToRs for the external audit; (iii) targeted FM Procedures and internal control mechanisms across the project activities shall be detailed in the project PI; (iv) strong FM staffing arrangements; (v) periodic FM supervisions; and (vi) IFRs reviews and monitoring.

25. **Implementation Support Plan.** Implementation support of project FM will initially be at least every six months and will be adjusted as needed to respond to the outcome of the FM assessments during implementation. An in-depth FM review will be conducted following the completion of one year of project effectiveness.

26. **Time Bound Action Plan:** The action plan below indicates the actions to be taken for the project as the project moves forward.

Table A2.4: Agreed FM Action Plan

No.	Action	Date due by	Responsible
1.	Preparation of the PIM incorporating the FM policies and procedures	Project effectiveness	IHPAU
2.	Recruitment of a Senior Grant Specialist	Project effectiveness	PIH
3.	Recruitment of a Finance Manager	Project effectiveness	PIH
4.	IHPAU will recruit an additional internal auditor to ensure operations of the project are reviewed on a regular basis	Project effectiveness	IHPAU
5.	Adopt appropriate software for use in Project Accounting	Forty-five days after effectiveness	IHPAU
6.	Agree on formats and content of IFRs and SOEs for all levels of implementation	Done	IHPAU & PIH



No.	Action	Date due by	Responsible
7.	Open segregated DAs	Three months after project after effectiveness	IHPAU & PIH
8.	Provision of specific training in FM & disbursement for Project FM staff (PIH & IHPAU)	Three months after project effectiveness	World Bank
9.	Establish the unified FM and reporting portal to align donor expenditures with the government system within the overall PFM architecture of the country.	Twelve months after project effectiveness	IHPAU & World Bank

27. **Conclusion.** The conclusion of the assessment is that the IHPAU and PIH have adequate systems to manage the IDA project funds. The overall FM residual risk of the project is ‘substantial’.

Procurement Arrangements

28. **Procedures.** Procurement under the proposed project will be carried out in accordance with the World Bank ‘Procurement Regulations for IPF Borrowers’ (dated July 2016 and revised in November 2017, August 2018, and November 2020), the ‘Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants’ (dated July 1, 2016) and beneficiary disclosure requirements, as well as other provisions stipulated in the project Legal Agreements. Furthermore, the Sierra Leone ‘National Public Procurement Act of 2016’ will apply for tenders approaching national market taking into considerations the requirements of Clauses 5.3, 5.4, 5.5 and 5.6 of the Procurement Regulations for IPF Borrowers.

29. **Implementation arrangements.** Procurement under this project shall be carried out by IHPAU that is under the MoHS and PIH an international NGO registered in Sierra Leone that will implement Component 1 of the project. IHPAU is implementing all World Bank funded project and has the required capacity.

30. **Assessment of procurement system for PIH.** The World Bank assessed PIH, an international NGO, that will be one of the implementing agencies of this project. The PIH Procurement Policy indicate that they do centralized purchase through its Boston-based Supply Chain team that provides support for inventory management, inventory planning, sourcing, and ordering, as well as international logistics. The PIH Procurement Policy also recognizes that each site has specific policies based on local challenges, laws and required national practices, any conflicts between international and local legal and regulatory requirements should first be discussed with Site Grant and Finance Managers to ensure that all funders and legal requirements are met. PIH Procurement Policy allows to apply policies and legal requirement of the funder as shown in the following quote “The aim of procurement is to carry out activities in such a way that the supplies, services and works procured are of the right price, quality and quantity while meeting the rules and regulations of PIH’s policies as well as any donor regulations”.

31. PIH aims to ensure that all its procurement is conducted ethically with an awareness of the impact on all stakeholders. Key principles include Fairness and Impartiality, Integrity, Transparency, Environmental Sustainability and Accompaniment by Making a conscious effort to buy locally where possible while still trying to achieve value for donor funds. PIH Procurement Policy has the minimum core procurement principles as required by the World Bank procurement regulations; however, it applies purchasing and supply chain management which



is different from public procurement that is used by the Government and the World Bank. Based on the assessment finding, PIH does not have the required public procurement capacity and because their procurement policy allows for use of donor policies, they will be required to recruit staff with required qualification and experience in public procurement with knowledge of procurement of World Bank funded projects before project effectiveness and will be required to apply World Bank Procurement Regulations for IPF Borrowers in conducting procurement under this project. After project effectiveness, the World Bank will provide procurement capacity building to project implementation staff to ensure that they understand the public procurement procedure and its applicability during project implementation to minimize possible procurement risk. The procurement risk for PIH is rated **High** and will be reduced to residual risk of **Substantial** after implementation of mitigation measures.

32. **Staffing.** The Procurement Unit of IHPAU is staffed with a Procurement Specialist, Procurement Officer and two (2) Procurement Assistants. The unit currently manages three (3) projects namely, HSSDP, REDISSE and COVID-19 project. This incoming project is expected to increase the workload of the unit. To address this, it is proposed that an additional Procurement Officer with qualifications and experience acceptable to the World Bank be recruited before project effectiveness. The assessment of PIH indicate that it does not have experience in public procurement and the World Bank procedures, but its procurement policy allows use of donor procedures in implementing donor funded projects, to mitigate this weakness PIH will be required to hire a qualified and experienced Procurement Officer, before project effectiveness, with experience in public procurement and World Bank procurement procedures as shall be specified in the approved ToRs.

33. **Preparation of PPSD.** As part of the preparation of the project, the Recipient prepared a PPSD, and it has been approved by the World Bank. The PPSD which describes how procurement activities will support project operations for the achievement of PDOs and deliver VfM. The procurement strategy is linked to the project implementation strategy ensuring proper sequencing of the activities. The PPSD considers institutional arrangements for procurement; roles and responsibilities; thresholds, procurement methods, prior review, and the requirements for carrying out procurement. It provides applicable procurement guidelines, operational context, market analysis, institution arrangements for Procurement, client capability assessment. and procurement plan. It also includes a detailed assessment and description of IHPAU and MoHS as well as PIH capacity for carrying out procurement and managing contract implementation, within an acceptable governance structure and accountability framework. Other issues include the behaviors, trends, and capabilities of the market (i.e., Market Analysis) to respond to the procurement plan.

34. **Procurement Planning.** A Procurement Plan is the output of the PPSD, and which outlines the procurement procedures to be used to plan and monitor implementation of investment activities will be prepared and agreed upon by the World Bank and Government. An 18-month Procurement Plan for the project reflecting the actual project implementation needs and the plan has been submitted, reviewed, and approved by the World Bank.

35. **Standard Procurement Documents (SPD):** The project shall use the latest SPD versions of December 2019 for Consulting Services, February 2020 for Non-Consulting Services, August 2020 for Goods and January 2021 for Works or any other version as revised.

36. **Use of Country Systems.** For procurements involving National Procurement Procedures below the defined thresholds, national procurement systems may be used as defined by the PPSD taking into considerations the requirements of Clauses 5.3, 5.4, 5.5 and 5.6 of the Procurement Regulations for IPF Borrowers. The project



activities will also require strong technical capability to prepare proper technical specifications to avert lack of, or inadequate, market response, this capability, or a plan to enhance it will be described in the procurement strategy. Open competitive approach to the market will be the World Bank preferred approach as it provides all eligible bidders/proposers with timely and equal opportunity to provide the required goods or services.

37. **Procurement Management Risk Assessment.** Given that the country’s post conflict and fragility context, the procurement management risk assessment found that even though the current staff in IHPAU are doing procurement in World Bank funded projects, (a) the capacity of the existing staff remains low despite several training and capacity building workshops being conducted by the World Bank; (b) the numbers of staff available is small compared to the expected workload; (c) substantial delays in internal approvals on procurement decisions since the technical teams are in different beneficiary departments housed separately; (d) limited knowledge in the World Bank’s Procurement Regulations and use of the World Bank’s STEP; (e) need for streamlining of the record keeping system; (f) inefficiencies and delays in procurement process; (g) insufficient competition in procurement; (h) weak complaint redress system; and (i) PIH lack of knowledge and capacity in use of public procurement and World Bank procurement procedures.

38. **Procurement Risk.** The procurement management risk for this project is rated **Substantial**. To address the risks and weaknesses identified, mitigation measures have been discussed and agreed with the MoHS respectively as shown in the table below and the recommendation of the PPSD has been submitted by the government and approved by the World Bank.

39. **Procurement Post Reviews (PPRs) and Independent Post Reviews (IPRs) by the World Bank.** Based on the assessed agency implementation risk for procurement, which is high Risk, the World Bank will carry out PPRs or IPRs for all contracts based on the approved procurement plan not having been subject of prior review by the World Bank using a sample of 20 percent. Based on continuing assessment of risk and the success of risk mitigation measures implemented, the sample size will be reduced as risk mitigation measures are successfully implemented. Note that based on risk rating the sample sizes for the PPRs or IPRs are as follows: 5 percent for Low-Risk rating, 10 percent for Moderate Risk rating, 15 percent for Substantial Risk rating and 20 percent for High-Risk rating.

Table A2.5: Project Procurement Risk Factors and Mitigation Measures

Risk Factor	Mitigation Measure
Capacity building of procurement staff	<ul style="list-style-type: none"> Attend training in World Bank procurement procedures. Conduct training on new World Bank procurement procedures Regular supervision, support, and monitoring.
Low procurement staff levels	<ul style="list-style-type: none"> Two procurement staff (one for IHPAU and another for PIH to be hired specifically for this project).
Substantial delays in internal approvals on procurement decisions	<ul style="list-style-type: none"> Conduct regular meeting to identify delays and the causes and provide solutions. Technical and procurement teams to work together to find solutions through the Project Technical Committee.
Limited knowledge in the World Bank’s Procurement Regulations and use of STEP	<ul style="list-style-type: none"> Conduct regular procurement clinics. Hand-holding the team on use of STEP.
Inefficiencies and delays in procurement process	<ul style="list-style-type: none"> Regular monitoring through procurement plan in STEP.
Insufficient competition in procurement	<ul style="list-style-type: none"> Aggregation of smaller contract packages wherever feasible Sensitization of private sector to bid for public tenders.



Risk Factor	Mitigation Measure
Weak complaint redress system	<ul style="list-style-type: none"> • Disclosure of complaint redress procedure. • Bi-annual report of all complaints received, and action taken.
Fraud and corruption risks [including collusion and outside interference] in contracting process	<ul style="list-style-type: none"> • Disclosure of procurement plan, Invitations for Bids (IFB), and Bidding Documents (BDs) • Monitor Bidders and bids using Company Risk Profile database (CRPD) and check references of experience certificates, checks authenticity of bank guarantees and insurance policies, etc. • Strengthen bid evaluation committees and define tasks related to resolving complaints during selection phase and standstill period, and beyond. • Disclosure of contract awards and stress on Beneficial Ownership disclosure. • Creating awareness on effects of fraud and corruption to local to central and local government PIUs and to bidder's community. • Regular reviews such as PPR, internal Audit, external audit and follow up on audit findings and recommendations.
PIH's Lack of knowledge and experience in public procurement and World Bank Procurement Regulations	<ul style="list-style-type: none"> • The Recipient to assist in development of appropriate ToR for a public procurement specialist. • PIH to hire a qualified and experienced public procurement specialist with experience in World Bank procurement procedures. • Capacity building of PIH project implementation staff on World Bank procedures.

Table A2.6: Procurement Action Plan

No.	Action	Date due by	Responsible
1	Completion and clearing of PPSD	Done	IHPAU/World Bank/PIH
2	Hiring of additional procurement staff	Before project effectiveness	MoHS/IHPAU and PIH
2	Strengthen capacity on the use of STEP tools, which is being used to manage all procurement transactions and related documentation.	Ongoing	World Bank
3	Finalize the PIM to include procurement procedures and implementation arrangements for the project along with the standard and sample documents to be used.	Before project effectiveness	MoHS/IHPAU/PIH
4	Develop records and contract management systems to ensure efficient and effective contract management.	Three months after effectiveness and continuous monitoring	MoHS/IHPAU/PIH



Annex 3: PIH Experience in Lesotho and Rwanda

Lesotho

1. In 2014, the Government of Lesotho (GOL), in partnership with PIH Lesotho, launched a National Health Care Reform to strengthen the PHC system. Among Reproductive, Maternal, Newborn, Child and Adolescent Health and Nutrition (RMNCAH) findings of an evaluation carried out in 2017–2018 across 68 health facilities were a 40 percent increase in completed four ANC visits and a 42 percent increase in children fully immunized at age 1. The reform interventions included investment in the five S's, decentralization of resources and decision-making, and professionalization of village health workers. The results of these investments were also reflected in measures of health system functioning. According to the evaluation, the proportion of health centers were able to provide facility-based deliveries, which increased from 3 percent to 95 percent and contributed to a 15-fold increase in the number of deliveries at health centers. Availability of essential drugs in health centers increased from 58 percent in 2010 to 94 percent in 2018.

Rwanda

2. In 2009, the Ministry of Health and PIH in Rwanda spearheaded a health system strengthening (HSS) intervention in two target rural districts as part of the Rwanda Population Health Implementation and Training (PHIT) Partnership. Evaluation of the project showed a dramatic drop in childhood mortality from 229.8 to 83.2 deaths per 1000 live births in PHIT areas (annual rate of reduction: 13.5 percent) compared with 157.7 to 75.8 deaths per 1000 live births in other rural areas (annual rate of reduction: 9.0 percent). Similarly, neonatal mortality decreased from 55.6 to 26.2 per 1000 live births in the intervention districts against 38.3 to 27.1 per 1000 live births in other rural areas. Improvements were also seen in immunization coverage for under-five children and postnatal care and were most marked among the poorest households. The PHIT Partnership's health systems support aligns with the World Health Organization's (WHO) six health systems building blocks aimed at dramatically improving UHC. The approach combined investments in project interventions toward UHC, quality improvement initiatives and mentorship, and professionalization of CHWs.



Annex 4: Economic and Financial Analysis

Introduction

1. **The objective of the project** is to increase utilization and improve quality of reproductive, maternal, child and adolescent health and nutrition services, especially for the poor and the vulnerable in the following five districts: Bonthe, Falaba, Kailahun, Tonkolili and Western Area Rural. To achieve this objective, the project will provide basic services to address high maternal and child mortality rate while strengthening local systems and capacity to manage and deliver health services.

Summary of Project Activities

The Project will be implemented through four components: (a) improving quality, efficiency, and effectiveness of RMNCAH-N services (b) strengthening national level health systems (c) project management and monitoring and evaluation and (e) contingent emergency response. Component 1 will finance interventions to improve the financial, human, and infrastructural capabilities of selected facilities at the primary health level (contractually paired with other facilities to provide a set of curative and preventive services and referral of pregnant women) to deliver quality services and manage pregnancy-related complications and childhood diseases. Component 2 will enhance national level health systems by strengthening leadership and HRH capacity, PFM, HMIS, SLeSHI, pharmaceutical supply chain systems, and private sector participation. This component will focus on strengthening epidemic preparedness, understanding non-communicable disease risks, and managing medical waste. Component 3 will devote resources to project coordination and management. Finally, Component 4 will be a zero-budget component which will serve as a contingency fund that could be triggered in case of a public health emergency. The Project's main beneficiaries are women and children in the project areas. The project activities will increase the beneficiaries utilization of improved, quality reproductive, maternal, and child health and nutrition services.

Cost-effectiveness analysis (CEA)

2. Effectiveness of the project will be measured through the PDO in terms of change of rate of service utilization and its impact on the avoiding mortality and morbidity within the target population as measured in Disability Adjusted Life Years (DALYs)¹⁴. Specifically, a cost-effectiveness analysis (CEA) is conducted to assess the project's value for money based on the ratio of cost per DALY averted, while comparing the project to a counterfactual of no project.

3. DALYs are expected to be reduced by improving key indicators, including deliveries attended by a skilled professional, antenatal care, children fully immunized, nutrition services and quality of care. For instance, skilled attendance at delivery is estimated to avert about 16 to 33 percent of maternal deaths by preventing obstetric complications.¹⁵ Increased utilization of antenatal care and nutrition services will also maintain the health of pregnant women and infants. Again, childhood immunization was found to have a net return of US\$16 in illness

¹⁴ DALYs for a disease or health condition are calculated as the sum of the Years of Life Lost (YLL) due to premature mortality in the population and the Years Lost due to Disability (YLD) for people living with the health condition or its consequences (WHO).

¹⁵ Graham, W., Bell, J., and Bullough, C. (2001). "Can Skilled Attendance at Delivery Reduce Maternal Mortality in Developing Countries?" page 97–130. In *Safe Motherhood Strategies: A Review of the Evidence*. Studies in Health Services Organisation and Policy, 17.



cost avoided for every dollar invested over ten years in Sub-Saharan Africa.¹⁶ Better service quality is also likely to encourage people to utilize more primary health care particularly in rural areas, thus expanding effective coverage of important services¹⁷. An increased utilization of maternal, infant, newborn child and nutrition services is expected to reduce morbidity and mortality.

Methodology

4. *Estimating Costs.* Project costs considered for the CEA included all costs associated with procurement and financial management. They reflect the marginal costs of the project compared to a no-project counterfactual. In this case, we consider the funds provided by the World Bank and Global Financing Facility (US\$60 million) to be disbursed according an estimated schedule. Operating costs, supply chain costs and out-of-pocket costs are not captured.

5. *Estimating Benefits.* The analysis uses the number of deliveries attended by skilled health personnel and number of children vaccinated as proxies to estimate DALYs averted for mothers and children under five years old. The two indicators drawn from the project results framework are adjusted to account for results that would occur without the project.

6. For maternal DALYs averted, it is assumed that a Sierra Leonean girl suffers from obstetric complications due to teenage pregnancy at age 15. She suffers for 5 years and dies as a result. To calculate the DALYs incurred, we estimate the life years lost due to premature death (YLL) and the years lost due to disability (YLD). Based on Sierra Leone's life expectancy of 55 years, $YLL=55-20=35$. We compute YLD using a disability of weight of 0.324 for pregnancy complication (maternal hemorrhage as a proxy).¹⁸ Given that the complication lasts 5 years, $YLD=0.324*5=1.62$. Hence the DALYs incurred will be $35+1.62=36.62$.

7. Now we assume that the project intervention provides treatment for her pregnancy complication at age 15. She does not die at 20, but lives (in the treated state) for the expected life span of 55 years. DALYs averted by the project intervention is estimated as follows: $YLL=55-55=0$. Assuming a conservative 5% decrease of disability weight, $YLD=0.3078*40=12.31$. Therefore, DALYs averted = $36.62-12.31=24.31$. To arrive at the total maternal DALYs averted per year, the DALYs averted (24.31) is multiplied by the adjusted number of deliveries attended by skilled health personnel.

8. DALYs averted for children under five years old is similarly estimated. We assume that an unvaccinated kid contracts severe diarrheal disease from rotavirus at age 1. Then the kid dies at age 4. $YLL=55-4=51$. With a disability weight of 0.247 for severe diarrheal disease for children¹⁹ and given that the disease lasts 3 year, $YLD=0.247*3=0.74$. That works out to $51+0.74=51.74$ DALYs.

9. The kid is now assumed immunized due to the project intervention at age 1. He does not die at age 4, but

¹⁶ Ozawa, S., Clark, S., Portnoy, A., Grewal, S., Brenzel, L., & Walker, D. G. (2016). Return on Investment from Childhood Immunization in Low- And Middle-Income Countries, 2011-20. *Health affairs (Project Hope)*, 35(2), 199–207. <https://doi.org/10.1377/hlthaff.2015.1086>

¹⁷ Gage, A. D., Leslie, H. H., Bitton, A., Jerome, J. G., Joseph, J. P., Thermidor, R., & Kruk, M. E. (2018). Does quality influence utilization of primary health care? Evidence from Haiti. *Globalization and health*, 14(1), 59. <https://doi.org/10.1186/s12992-018-0379-0>

¹⁸ Emerson, J., and Kim, D.D. (2018). DALY calculator. Center for the Evaluation of Value and Risk in Health, Tufts Medical Center, Boston, MA.

¹⁹ *ibid*



lives (getting all his immunization) for the expected life span of 55 years. $YLL=55-55=0$; based on a 5 % reduction in disability weight, $YLD=0.23465*54=12.67$. DALY averted will be $51.74-12.67=39.07$. Again, we calculate the DALYs averted for children under 5 by multiplying DALYs averted (39.07) by the adjusted number of children immunized through the project.

10. After considering the effect of inflation, for the base-case scenario, the DALYs averted and costs are discounted at a rate of six percent, which is double the three percent suggested by the WHO.²⁰ In the base-case scenario, an estimated 20,638,175 DALYs are averted for the project period at an estimated cost of US\$ 50,535,638, resulting in a cost per DALY ratio of US\$2.45.

11. We apply the common threshold decision standard for cost-effectiveness to determine whether QEHSSSP is cost-effective. According to the criterion, if cost-effectiveness ratio of a project, i.e., cost per DALY averted, is lower than gross national income (GNI) per capita, then a project is very cost effective. A project is cost-effective if the ratio is less than three times the GNI per capita.²¹ QEHSSSP is therefore very cost-effective since the estimated cost per DALY averted of US\$2.45 is less than Sierra Leone’s GNI per capita of US\$490 (World Development Indicators, 2020).

Key underlying Assumptions

- Sierra Leone GNI per capita = \$490 (WDI, 2020).
- Life expectancy in Sierra Leone= 55 years.
- Disability weight for pregnancy complication (maternal hemorrhage as a proxy) =0.324²² (Disability weight of 0.308- a fall of 5 percent- with the project intervention)
- Disability weight for severe diarrheal disease for children = 0.247²³ (Disability weight of 0.235- a fall of 5 percent- with the project intervention)
- death and birth rates are excluded

Table A4.1: Results of CEA Base-case scenario and Sensitivity Analyses

Base-case scenario @6% discount rate Cost/DALY averted (US\$)	Sensitivity Analyses	
	High-case scenario @9% discount rate Cost/DALY averted (US\$)	Low-case scenario @ 3% discount rate Cost/DALY averted (US\$)
2.45	2.50	2.40

²⁰ World Health Organization. Making Choices in Health: WHO Guide to Cost-Effectiveness Analysis.2003.

²¹ Chatterjee, S., Laxminarayan, R. & Gosselin, R.A. (2016). Cost Per DALY Averted in a Surgical Unit of a Private Hospital in India. World J Surg 40, 1034–1040. <https://doi.org/10.1007/s00268-015-3376-y> (Accessed on July 4, 2021)

²² Emerson, J., and Kim, D.D. (2018). DALY calculator. Center for the Evaluation of Value and Risk in Health, Tufts Medical Center, Boston, MA.

²³ *ibid*



Sensitivity analysis

12. The calculation of the DALYs required many assumptions such as choice to discount rate and disability weight, which affected the estimated DALYs averted. The discount rate is tested in a sensitivity analysis to ascertain its impact on the results. As shown in Table A4, the high-case scenario of 9 percent discount rate produces a cost per DALY averted ratio of US\$2.50, while the low-case scenario of 3 percent discount rate yields a ratio of US\$2.40.

Limitations

13. While the analysis follows the theory and practice of cost and DALY calculation methods, it bears to point out some limitations. First, the costs estimates do not capture operating costs, supply chain costs, and out-of-pocket costs, thereby possibly underestimating costs. Second, the proxy variables used to calculate the DALYs averted focus on only children and women, leaving out other vulnerable people who will benefit from the project. As a result, the project impact could be underestimated. Finally, the cost-effectiveness analysis appears optimistic.



Annex 5: Overview of SLeSHI Objectives, Expected Beneficiaries, Risks and Mitigation Measures

1. **Introduction:** To mitigate the high OOP expenditure for healthcare service delivery, which is a barrier to utilization of health facilities, resulting in poor health outcomes. The government has initiated implementation of the SLeSHI Scheme which was enacted in 2017 as a path to sustainable domestic health financing to increase access to quality healthcare in an efficient and equitable manner. The scheme aligns with other national legislations (Vision 2025, National Health Policy 2020, Local Government Act 2004, and the Sierra Leone Global Health Strategy) and mirrors the Sustainable Development Goals (SDGs) on health, sanitation, and poverty eradication.
2. **Objective:** To increase access to healthcare for every Sierra Leonean and residents of Sierra Leone; mobilize financial resources, strengthen community empowerment and engagement in promotion of health insurance; provide financial protection for the poor and ensure sustainability of the scheme and improve quality of healthcare services provided under the scheme and attain UHC.
3. **Expected Beneficiaries:** SLeSHI to provide for all Sierra Leoneans and residents of Sierra Leone (formal and informal workers and indigents).
4. **Challenges:** limited revenue mobilization space; limited cost data/ information, communication, and ICT infrastructure in the health sector for social health insurance implementation; inadequate experts in social health insurance; literacy level of the informal sector; and limited exposure of citizens to the concept of health insurance.

Risks and Mitigation Measures

5. **Controlling Claims Escalation Risk:** The cost of care and the associated medical inflation rates are the most sensitive assumptions in assessing the viability of SLeSHI. Hence, controlling the cost of claims is central to the financial sustainability of SLeSHI. The key drivers of SLeSHI's ability to manage the cost of claims are as follows: Empanelment, underwriting, claims handling and quality assurance.
6. **Mitigation:** It is important for SLeSHI to manage its exposure to moral hazard and claims fraud to mitigate its exposure to adverse claims escalation. The following are some ways in which this can be achieved: work with partners and distribution agents to engage the insured members; require a minimum take up rate for certain groups of people who may be enrolled together e.g. unionized workers; put in place waiting periods particularly for the higher severity claims; use technology to verify and assess claims and behavior through the promotion of preventative care also helps improve the long-term health of the insured individuals and the Scheme. Hence, developing preventative care initiative and leveraging MoHS initiatives would serve to benefit SLeSHI and its members.
7. Additionally, procedures applied regarding claims, leave room for fraud as well as overcharging by medical providers. Specifically, beneficiaries may collude with providers or claims staff to process and pay out fraudulent claims. Hence, the following claims handling procedures serve as plausible means to control claims escalation: Pre-authorization of treatment before a procedure is undertaken particularly for certain high cost inpatient claims; Claims verification processes that ensure a claim goes through the appropriate checks before it is paid; establishment of a co-pay– allowing the insured member to take on some responsibility in the management of the cost of claims; provider audits and accreditation to ensure adherence to protocols. Setting thresholds to limit



exposure to large claims, as well as accumulation of claims.

8. **Managing Expense Risk:** As a national health scheme, SLeSHI's administration expenses as a proportion of contributions are expected to be less than 20 percent. This would allow the Scheme to meet its mandate more efficiently as a social security scheme – to pay for medical benefits. The following can help the Scheme manage its expenses efficiently: leverage existing infrastructure, relationships, groups; outsource cost effective functions that others can do; invest in technology for efficiency at scale; and monitor costs associated with operations.

9. **Information, communication, and technology (ICT) infrastructure Risk:** Current insurance companies' transactions are paper-based resulting in financial risk. Data integrity and security: It is widely accepted globally that health data can be messy. This is in large part driven by the fact that data quality is a factor of literacy, level of professional training, and the absence of a standard nomenclature for capturing and reporting medical claims data.

10. **Mitigation:** This requires investments in biometric technology to allow for mapping and enrolling of beneficiaries by fingerprints or via face recognition technology. These considerations shall form a key part of the technical requirements for the design of the IT platform. Engagement with the National Civil Registration Authority to harmonize beneficiary data with national data thereby ensuring the integrity of beneficiary bio data, reducing the risk of duplicate and false claims. Collaboration with the National Commission for Social Action (NaCSA) to identify indigents to create digital health wallet for free healthcare and prevent misuse of indigent benefit package.