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Report No: PADHI00423

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED GRANT

IN THE AMOUNT OF SDR 38 MILLION
(US$50 MILLION EQUIVALENT)

TO THE

REPUBLIC OF ZAMBIA

FOR A

ZAMBIA HEALTH EMERGENCY PREPAREDNESS, RESPONSE AND RESILIENCE PROJECT USING THE MULTIPHASE PROGRAMMATIC APPROACH

UNDER PHASE 6 OF
THE HEALTH EMERGENCY PREPAREDNESS, RESPONSE, AND RESILIENCE PROGRAM USING THE MULTI-PHASE PROGRAMMATIC APPROACH

WITH AN OVERALL FINANCING ENVELOPE OF US$1 BILLION EQUIVALENT APPROVED BY THE BOARD ON SEPTEMBER 29, 2023, AND US$500 MILLION EQUIVALENT ADDITIONAL FINANCING APPROVED BY THE BOARD ON MAY 24, 2024

June 13, 2024

Health, Nutrition and Population Global Practice
Eastern and Southern Africa

CURRENCY EQUIVALENTS

(Exchange Rate Effective April 30, 2024)

Currency Unit =	Zambian Kwacha (ZMW)
ZMW 26.78 =	US$1
US$1.32 =	SDR 1

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Victoria Kwakwa
Regional Director:	Daniel Dulitzky
Country Director:	Nathan M. Belete
Practice Manager:	Ernest E. Massiah
Task Team Leaders:	Moustafa Mohamed ElSayed Mohamed Abdalla, John Bosco Makumba

ABBREVIATIONS AND ACRONYMS

ACDCP	Africa CDC Regional Investment Financing Project
BOZ	Bank of Zambia
CBV	Community-Based Volunteer
CDC	Center for Disease Control and Prevention
CERC	Contingent Emergency Response Component
CHA	Community Health Assistant
COVID-19	Coronavirus Disease 2019
CPF	Country Partnership Framework
CRI	Corporate Results Indicator
DA	Designated Account
ESMF	Environmental and Social Management Framework
FM	Financial Management
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GENPAR	Gender in Preparedness and Response
GHG	Greenhouse Gas
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
GRZ	Government of Republic of Zambia
HE	Health Emergency
HEPRR	Health Emergency Preparedness, Response, and Resilience
HMIS	Health Management Information System
HRH	Human Resources for Health
IDSR	Integrated Disease Surveillance and Response
IFR	Interim Financial Report
IGAD	Intergovernmental Authority on Development
IHR	International Health Regulations
IPC	Infection Prevention and Control
IPF	Investment Project Financing
JEE	Joint External Evaluation
M&E	Monitoring and Evaluation
MoFNP	Ministry of Finance and National Planning
MoH	Ministry of Health
MPA	Multiphase Programmatic Approach
NAP	National Adaptation Plan
NCD	Noncommunicable Disease
NDC	Nationally Determined Contribution
NHSP	National Health Strategic Plan
OAG	Office of Auditor General
PAD	Project Appraisal Document
PDO	Project Development Objective
PHC	Primary Health Care
PIU	Project Implementation Unit
PPSD	Project Procurement Strategy for Development
PrDO	Program Development Objective
RAC	Regional Advisory Committee
RCCE	Risk Communication and Community Engagement

REDISSE	Regional Disease Surveillance Systems Enhancement
RMNCAH-N	Reproductive, Maternal, Newborn, Child, and Adolescent Health and Nutrition
RRT	Rapid Response Team
SC	Steering Committee
SDR	Special Drawing Rights
SEA/SH	Sexual Exploitation and Abuse/Sexual Harassment
SOP	Standard Operating Procedure
STEP	Systematic Tracking of Exchanges in Procurement
WASH	Water, Sanitation, and Hygiene
WBD	Waterborne Disease
WHO	World Health Organization
ZNPHI	Zambia National Public Health Institute

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DATASHEET

BASIC INFORMATION

Project Beneficiary(ies)	Operation Name		
Angola, Botswana, Burundi, Congo, Democratic Republic of, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Rwanda, Sao Tome and Principe, South Sudan, Tanzania, Zambia, Zambia	Zambia Health Emergency Preparedness, Response and Resilience Project Using the Multiphase Programmatic Approach		
Operation ID	Financing Instrument	Environmental and Social Risk Classification	
P505188	Investment Project Financing (IPF)	Moderate	

Financing & Implementation Modalities

[✓] Multiphase Programmatic Approach (MPA)	[✓] Contingent Emergency Response Component (CERC)
[ ] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternative Procurement Arrangements (APA)	[ ] Hands-on Expanded Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date	Expected Program Closing Date
13-Jun-2024	30-Jun-2029	30-Sept-2030
Bank/IFC Collaboration		

No	

MPA Program Development Objective

The MPA Program Development Objective (PrDO) is to strengthen health system resilience and multisectoral preparedness and response to health emergencies in Eastern and Southern Africa.

MPA FINANCING DATA (US$, Millions)

MPA Program Financing Envelope	1,510.00
with a reduction of IBRD	190.00
with a reduction of IDA	431.00

Proposed Development Objective(s)

The Project Development Objective (PDO) is to strengthen health system resilience and multisectoral preparedness and response to health emergencies in the Republic of Zambia.

Components

Component Name	Cost (US$)
Strengthening the Preparedness and Resilience of the Health Systems to Manage HEs	10,000,000.00
Improving the Detection of and Response to HEs through a Multisectoral Approach	35,000,000.00
Project Management	5,000,000.00
Contingent Emergency Response	0.00

Organizations

Borrower:	Republic of Zambia
Implementing Agency:	Ministry of Health

MPA FINANCING DETAILS (US$, Millions)

Board Approved MPA Financing Envelope	**1,500.00**
MPA Financing Envelope:	1,510.00
of which Bank Financing (IBRD):	190.00

of which Bank Financing (IDA):	1,310.00
of which Other Financing sources:	10.00

PROJECT FINANCING DATA (US$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)? No

Is this project Private Capital Enabling (PCE)? No

SUMMARY

Total Operation Cost	**50.00**
Total Financing	**50.00**
of which IBRD/IDA	**50.00**
Financing Gap	**0.00**

DETAILS

World Bank Group Financing

International Development Association (IDA)	50.00
IDA Grant	50.00

IDA Resources (US$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
Zambia	0.00	50.00	0.00	0.00	50.00
National Performance-Based Allocations (PBA)	0.00	50.00	0.00	0.00	50.00
Total	**0.00**	**50.00**	**0.00**	**0.00**	**50.00**

Expected Disbursements (US$, Millions)

WB Fiscal Year	2024	2025	2026	2027	2028	2029
Annual	0.00	15.00	15.00	10.00	5.00	5.00
Cumulative	0.00	15.00	30.00	40.00	45.00	50.00

PRACTICE AREA(S)

Practice Area (Lead)

Health, Nutrition & Population

Contributing Practice Areas

CLIMATE

Climate Change and Disaster Screening

Yes, it has been screened and the results are discussed in the Operation Document

SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Moderate
2. Macroeconomic	Substantial
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	Substantial
6. Fiduciary No Fiduciary risk rating under Supervision Phase has been completed in Financial Management System to date. Procurement Risk rating from Specialist: Substantial as of 2024-05-15T00:00:00Z	Substantial
7. Environment and Social	Moderate

Environment Risk rating from Specialist:
Moderate as of 2024-05-02T09:02:15Z
Social Risk rating from Specialist:
Moderate as of 2024-05-02T09:02:15Z

8. Stakeholders	Moderate
9. Overall	Substantial
Overall MPA Program Risk	Substantial

POLICY 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

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

E & S Standards	Relevance
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant
ESS 2: Labor and Working Conditions	Relevant
ESS 3: Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4: Community Health and Safety	Relevant
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Not Currently Relevant
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
ESS 8: Cultural Heritage	Relevant
ESS 9: 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

Legal Covenants

Sections and Description
Section I.A.2 of Schedule 2 to the Financing Agreement: Not later than six (6) months after the Effective Date, the Recipient shall establish and thereafter maintain throughout the period of implementation of the Project, a Project steering committee ("Project Steering Committee") with a mandate, terms of reference, composition, and resources satisfactory to the Association, chaired by the Permanent Secretary for Technical Services, and shall be responsible for, inter alia overseeing the Project implementation and making strategic decisions as further detailed in the Project Implementation Manual.
Section I.B of Schedule 2 to the Financing Agreement: Not later than forty-five (45) days after the Effective Date, the Recipient shall prepare and adopt an implementation manual acceptable to the Association ("Project Implementation Manual" or "PIM"), which shall contain detailed work flow, methods and procedures for the implementation of the Project, including but not limited to: (i) administration and coordination arrangements, including placement of necessary human resources for Project implementation; (ii) performance indicators of the Project; (iii) procurement arrangements; (iv) disbursement arrangements, reporting requirements, financial management procedures and audit procedures; (v) monitoring and evaluation; (vi) arrangements for preventing, detecting, reporting, investigation, remediation and otherwise addressing fraud and corruption, including compliance with the Anti-Corruption Guidelines (which shall be annexed thereto); (vii) roles and responsibilities of the Project Steering Committee and the PIU in the implementation of the Project; (viii) Personal Data collection and processing requirements in accordance with applicable national law and good international practice; (ix) environmental and social framework aspects, including a detailed description of the grievance redress mechanism process as well as any process for recording and reporting project-related accidents and incidents; (x) details on the composition and working arrangements of the Regional Advisory Committee; and (xi) such other arrangements and procedures as shall be required for the effective implementation of the Project.
Section I.F. of Schedule 2 to the Financing Agreement: In order to maximize the benefits of regional harmonization for purposes of the Project, no later than three (3) months after the Effective Date, the Recipient shall enter into a memorandum of understanding with IGAD (the "MOU), in form and substance satisfactory to the Association, as such MOU shall include provisions to the effect of ensuring that the Recipient shall participate in any activity carried out by IGAD under the MPA, including inter alia training events, workshops, data collection and analysis or knowledge-sharing.

Conditions

Type	Citation	Description	Financing Source
Effectiveness	Section 4.01, Article IV of the Financing Agreement	The Additional Conditions of Effectiveness consist of the following: (a) The	IBRD/IDA

		Recipient has established the Project Implementation Unit and hired or assigned: (i) a Project coordinator, (ii) a financial management specialist, (iii) a procurement specialist; and (iv) an environmental specialist and a social specialist in accordance with the Environmental and Social Commitment Plan (ESCP); all with terms of reference, qualifications, and experience satisfactory to the Association.	
Disbursement	Section III.B of Schedule 2 to the Financing Agreement	Notwithstanding the provisions of Part A of this Section, no withdrawal shall be made: (a) for payments made prior to the Signature Date; or (b) for Emergency Expenditures under Category (2), unless and until all of the following conditions have been met in respect of said expenditures: (i) (A) the Recipient has determined that an Eligible Crisis or Emergency has occurred, and has furnished to the Association a request to withdraw Financing amounts under Category (2); and (B) the Association has agreed with such determination, accepted said request and notified the Recipient thereof; and (ii) the Recipient has adopted the CERC Manual	IBRD/IDA

		and Emergency Action Plan, in form and substance acceptable to the Association.	

I. STRATEGIC CONTEXT

1. This Project Appraisal Document (PAD) describes the scope of Zambia's project under Phase 6 of the Health Emergency Preparedness, Response, and Resilience Program (the 'HEPRR Program') using the Multiphase Programmatic Approach (MPA) with an overall financing envelope of US$1 billion equivalent, approved by the World Bank's Executive Directors on September 29, 2023 (P180127), including its first phase. Phase 1 provided financing for Kenya; Ethiopia; Sao Tome and Principe; the East, Central and Southern Africa Health Community; and the Intergovernmental Authority on Development (IGAD). Phases 2 and 3 provided financing for Burundi and the Democratic Republic of Congo on March 29, 2024 (P504531 and P504532, respectively). Additional financing of US$0.5 billion equivalent was approved for the HEPRR Program as well as financing for Rwanda as Phase 4 on May 24, 2024 (P504764).

A. Country Context

2. **Zambia has experienced significant macroeconomic downturn, and weak economic performance has reversed income gains and exacerbated already high poverty rates.** Between 2000 and 2010, the country's gross domestic product (GDP) experienced an average annual growth rate of 7.1 percent, which fell in the following decade to an average of 3.6 percent. Nevertheless, despite a challenging environment, including a protracted debt restructuring process and weak copper production, Zambia's economy has been recovering from the pandemic recession. A recent severe drought has significant negative impact not just on food security but also on the growth prospect for 2024, particularly through reduced hydropower generation. Inflation remains well above the target level, and the Zambian kwacha has been depreciating significantly. Poverty levels decreased from 61 percent to 54 percent between 2010 and 2015, but following the coronavirus disease 2019 (COVID-19), combined with more recent price shocks, the poverty rate is estimated to have returned to the 2010 levels of 60 percent in 2022, with 48 percent of the population in extreme poverty.[1] About 79 percent of Zambia's rural population live below the poverty line, stemming largely from low levels of economic growth and agricultural productivity, lack of value addition, and limited employment opportunities.

3. **Zambia's population is growing rapidly with longer life expectancies; however, the public service delivery system has not been responsive enough to changing needs, and human capital and human development outcomes remain low.** Zambia's population is expected to grow from 20.4 million in 2023 to 27.0 million in 2033, and the urban population will exceed the rural population by 2029. Life expectancy rose from 45.2 years in 2000 to 63.0 years in 2023 and is projected to reach 65.1 in 2033. However, the provision of public services is insufficient for the changing demographics. For example, about 70 percent of the population in the capital city of Lusaka live in informal settlements,[2] increasing the risks of outbreaks and epidemics. Moreover, the growing population strains education, employment, health care, including reproductive, maternal, newborn, child, and adolescent health and nutrition (RMNCAH-N), and other social services. Consequently, Zambia's Human Capital Index is 0.4, implying that children born today will only be 40 percent as productive as they would be if they enjoyed full education and health.[3] The country's Human Development Index (HDI) fell by 1.8 percent from 0.575 to 0.565 between 2019 and 2021, largely due to inequality in health, education, and income.[4] The 2022 HDI showed improvement at 0.569, however, additional efforts will be required to accelerate the progress.[5]

[1] ZAMSTAT (Zambian Statistics Agency). 2023. *Zambia Living Conditions and Monitoring Survey (LCMS) 2022*.
[2] UN HABITAT (United Nations Human Settlements Programme). 2023. Country Brief: Zambia.
[3] World Bank. 2020. *Human Capital Project*.
[4] UNDP (United Nations Development Programme). 2022. *Human Development Report 2021–2022.*
[5] UNDP. 2023. *Human Development Report 2023-2024*.

4. **Zambia is highly exposed to climate change, particularly flooding, high heat, and drought, which are becoming more frequent and severe with climate change.** The country has limited adaptive capacity to address climate change, ranking 132 out of 185 countries on the Notre Dame Global Adaptation Index (ND-GAIN) of climate vulnerability and readiness.[6] Climate change is already having tangible impacts on the country's economic growth with an estimated loss of US$13.8 billion in annual economic growth (equivalent to a 0.4 percent loss) between 2007 and 2016 due to climate change.[7] It is estimated that by 2050, climate change could further reduce Zambia's GDP by approximately 6 percent.[8] The country is currently facing the effects of a severe drought in the 2023/24 wet season, having affected 84 of 116 districts. The drought affects 6.5 million people, and 2.4 million people are estimated to be severely food insecure.[9] The Government of the Republic of Zambia (GRZ) declared a national disaster and emergency on February 29, 2024.

B. Sectoral and Institutional Context

5. **Zambia faces the double burden of both communicable and noncommunicable diseases (NCDs) and experienced substantial disruptions in health service delivery during the COVID-19 pandemic.** While the major causes of deaths in Zambia are communicable diseases, maternal and neonatal conditions, and malnutrition, it is estimated that NCDs accounted for 35.0 percent of total deaths.[10] Key health outcomes show substantial progress, but further effort is needed to achieve the national targets. Between 2007 and 2018, the under-five mortality rate fell from 119 to 61 deaths per 1,000 live births, the maternal mortality ratio also decreased from 591 to 252 deaths per 100,000 live births, and the prevalence rate of stunting among under-five children declined from 49 percent to 35 percent.[11] An analysis of the Health Management Information System data in 2020 demonstrated service disruptions due to the onset of the COVID-19 pandemic. Disruptions from supply chain challenges, such as insufficient personal protective equipment, reduced service hours, strain on human resources for health (HRH), and reallocation of resources toward COVID-19-related activities have eroded progress in RMNCAH-N and other health outcomes including of NCDs. Moreover, fear of COVID-19 led to decreased demand for health services. The Ministry of Health (MoH) has worked on health system strengthening in various aspects. The number of health workers has increased since 2022; however, the gap remains (around 50 percent gap), and improving efficiency in the health workforce leveraging digital tools is critical and well aligned with the direction of the 2018–2024 National HRH Strategic Plan. Additionally, the 2022–2026 Digital Health Strategy guides the sector to improve the digital health ecosystem through strategic areas such as workforce, infrastructure, and services and applications.

6. **The Global Health Security Index 2021 ranked Zambia 159 out of 195 countries and 37 out of 54 African countries,[12] highlighting significant weaknesses in prevention, detection, and capacity to maintain health services during emergencies.** While the latest Joint External Evaluation (JEE) of the International Health Regulations (IHR 2005) conducted in October 2023 recognized significant progress in strengthening preparedness, early detection, and rapid response to public health emergencies, challenges such as limited laboratory capacity and absence of strategic documents including comprehensive essential health services guidelines were reported. Digital health would enhance the role of community health workers, the first responders to HEs and the core of comprehensive health service delivery. Strengthening primary health care (PHC) systems, alongside initiatives by the Zambia National Public Health Institute (ZNPHI), is crucial for a resilient response to HEs.

[6] ND-GAIN, Adaptation and Readiness Index, 2021
[7] World Bank, Zambia: Climate-Smart Agriculture Investment Plan. 2019.
[8] Tembo, et al. 2020. "Economic Implications of Climate Change in Zambia."
[9] UNICEF. 2024. *Rising Heat, Drought and Disease: Climate Crisis Poses Grave Risks to Children in Eastern and Southern Africa*. March 26, 2024.
[10] World Health Organization (WHO). 2023. *Country Disease Outlook: Zambia*.
[11] Demographic and Health Survey (DHS) 2018.
[12] 2021 Global Health Index Country Profile for Zambia.

7. **Zambia is committed to strengthening preparedness, early detection, and rapid response to public HEs.** The 2022–2026 National Health Strategic Plan (NHSP) aims to safeguard national public health security by preventing and controlling infectious and non-infectious public health threats by 2026. In February 2015, the GRZ established the ZNPHI, a specialized public health authority and technical arm of the MoH, leading in safeguarding the country's health security. The ZNPHI has been operationalized as an autonomous body since 2021, in accordance with the ZNPHI Act No. 19 of 2020 and the Statutory Instrument No. 34 of 2021.

8. **The country has been hit by the worst cholera epidemic in its history, starting in October 2023.** As of June 2, 2024, 23,303 cholera cases and 740 deaths were confirmed, which represents a case fatality rate of 3.2 percent. The outbreak exposed gaps in response and case control, prevention, and system resilience as highlighted above. A high number of cases was reported in urban slums with poor water, sanitation, and hygiene (WASH) conditions. Thus, a multifaceted approach combining WASH, rapid surveillance, patient care and case management, social mobilization, and oral cholera vaccines is key to controlling cholera and reducing deaths. Moreover, the scarcity of safe water sources during the climate change-fueled drought will likely compel individuals to turn to unsafe alternatives, raising the risk of waterborne illnesses such as cholera. Gender-specific risks due to different roles in water handling and health care require tailored prevention strategies, and gender-disaggregated data is needed for the assessment of these dynamics.[13]

9. **Climate change expands the burden of climate-sensitive diseases, particularly vector and water-borne diseases, while threatening health service delivery.** The spread of diarrheal diseases, the fourth leading cause of morbidity and mortality among children under five in Zambia, is linked with climate change-induced changes in precipitation patterns, particularly flooding.[14] Zambia's current cholera outbreak is linked to erratic rains, rising temperatures, and severe flooding combined with limited water sources due to drought, fueled by climate change.[15] Climate change is exacerbating malaria transmission in Zambia, a leading cause of death and disability, through rising temperatures and altered rainfall patterns.[16] Climate-induced droughts and floods also undermine food security, increasing malnutrition.[17] Increased flooding, such as the 2023 floods in Southern Zambia, disrupts access to health services.[18]

10. **The International Development Association (IDA) has supported the country's initiatives, including strengthening laboratory capacity, developing a specialized workforce, and improving surge capacity and cholera outbreak response** through the Africa CDC[19] Regional Investment Financing Project (ACDCP, P167916) and the Zambia COVID-19 Emergency Response and Health Systems Preparedness Project (P174185). The ACDCP aims to strengthen the country's disease detection and response capacity and support Zambia's commitment to serve as the Southern Africa Regional Collaborating Center of Africa CDC. It helps strengthen the laboratory network, surveillance, and disease intelligence, including early warning systems, with the One Health approach and build capacity for lab staff and field

[13] UNICEF. March 2023. *Cholera Outbreak in Eastern and Southern Africa*.
[14] Institute for Health Metrics and Evaluation. 2022. Zambia.
Koyuncu, A., M. Simuyandi, S. Bosomprah, and R. Chilengi. 2020. Nutritional Status, Environmental Enteric Dysfunction, and Prevalence of Rotavirus Diarrhoea among Children in Zambia. *PloS one* 15 (10): e0240258.
[15] Alliance For Science. 2024. *Zambia: Cholera Outbreak Linked to Effects of Climate Change*.
[16] Lubinda, J., U. Haque, Y. Bi, M. Y. Shad., D. Keellings, B. Hamainza, and A. J. Moore. 2021. "Climate Change and the Dynamics of Age-Related Malaria Incidence in Southern Africa." *Environmental Research* 197: 111017; Ryan, S. J., C. A. Lippi, and F. Zermoglio. 2020. "Shifting Transmission Risk for Malaria in Africa with Climate Change: a Framework for Planning and Intervention." *Malaria Journal* 19: 1–14.
[17] Davies. R. 2023. "Catastrophic Situation" After Floods Hit Southern and Central Provinces."; Munthali. B. 2024. *Zambia Declares National Disaster over Drought*.; ACAPS. 2023. *Country Analysis Zambia*.
Integrated Food Security Phase Classification – IPC (2023, November 13). Zambia: Acute Food Insecurity Situation for August – September 2023 and Projection for October 2023 – March 2024.
[18] IFRC. Zambia: Flood in Southern Province - DREF Final Report (MDRZM019). December 19, 2023.
[19] CDC = Center for Disease Control and Prevention.

epidemiologists. The COVID-19 Project has supported building Zambia's capacity to prevent, diagnose, and treat COVID-19 and improve resilience in health service delivery, including vaccine procurement, blood supply systems, upgrading/establishing One-Stop Center for gender-based violence (GBV), and training of health workers on infection prevention and control (IPC), COVID-19 testing, case management, and integrated disease surveillance and genomic sequencing. The World Bank also supports the Government's strong interest and leadership in digital solutions to improve public services through the Technical Support for Drone Utilization in Public Health Supply Chain and Diagnostic Services in Zambia (P181304) and the Operationalization of World Development Report 2021 - Sector-specific Support for Data Governance and Digital Solutions (P502177). Finally, the Pandemic Fund finances the Zambia Multisectoral Pandemic Preparedness and Response Project, implemented by the Food and Agriculture Organization and the World Health Organization (WHO). The MoH, ZNPHI, and the World Bank along with the development partners have worked on creating synergies among these projects.

11. **Zambia has decentralized the health system since 2023 to enhance PHC to protect the population against HEs.** Following the National Decentralization Policy in 2023, the District Health Services are devolved to local authorities including district health offices, zonal health centers, rural/urban health centers, and health posts. This is aligned with the Government's vision for universal health coverage through health systems strengthening using an integrated community and PHC approach. Community health has received more attention to protect the population's health. The MoH established a dedicated Community Health Unit within the Department of Public Health mandated to coordinate and provide oversight on community health services. The National Community Health Strategy 2022–2026, the Community Health Service Package, the Community Health Guidelines, and other policy documents are in place. To improve service delivery and health system resilience in Zambia, integrating HE preparedness into current programs, enhancing referral systems, and maintaining business continuity during emergencies is essential. Moreover, it is critical to provide required trainings at the community and PHC levels to build the capacity to implement programs, especially in the context of severe HRH shortage. As of January 2024, there are 2,055 community health assistants (CHAs) and 75,000 community-based volunteers (CBVs) in Zambia.

12. **Gender gaps in the health sector are critical challenges during HEs.** Zambia has a maternal mortality ratio of 252 deaths per 100,000 live births, an improvement from past years but still relatively high. Access to maternal and reproductive health services continues to be of concern[20] and is further hampered during an epidemic, such as COVID-19, due to a range of logistical and socio-cultural issues, thus underlining the importance of ensuring that RMNCAH-N supplies and services are a key part of essential health services during HEs.[21] Other gender gaps related to HEs also exist, as in other parts of Africa, specifically, the predominance of female health workers at lower levels of the hierarchy,[22] and higher prevalence of HIV among women than men. Yet, assessments of Zambia's public health surveillance system found minimal —if any—reporting of sex, age, and pregnancy status in health registers or in weekly reporting forms.[23]

[20] Blanchard, A. K., C. Jacobs, M. Musukuma. et al. 2023. "Going Deeper with Health Equity Measurement: How Much More Can Surveys Reveal about Inequalities in Health Intervention Coverage and Mortality in Zambia?" *Int J Equity Health* 22 (109).
[21] Kuria-Ndiritu, Shiphrah, et al. "Impact of the COVID-19 Pandemic and Policy Response on Access to and Utilization of Reproductive, Maternal, Child and Adolescent Health Services in Kenya, Uganda and Zambia." *PLOS Global Public Health* 4.1 (2024): e0002740; Waiswa, P., and P. Wanduru. 2021 "Rapid Policy Development for Essential RMNCAH Services in Sub-Saharan Africa: What Happened during the COVID-19 Pandemic and What Needs to Happen Going Forward?" *BMJ Glob Health* 6 (9): e006938. doi:10.1136/bmjgh-2021-006938.
[22] Lemiere, Christophe, et al. 2011. "Reducing Geographical Imbalances of Health Workers in Sub-Saharan Africa." World Bank Working Paper No. 209; Sialubanje, Cephas, et al. 2023. "Gender Integration and Female Participation in Scientific and Health Research in Zambia: A Descriptive Cross-sectional Study Protocol." *BMJ open* 13.3: e064139; Gow, J., et al. 2013. "An Evaluation of the Effectiveness of the Zambian Health Worker Retention Scheme (ZHWRS) for Rural Areas." *Afr Health Sci.* 13 (3): 800–7. doi: 10.4314/ahs.v13i3.40.
[23] Mandyata CB, Olowski LK, Mutale W. Challenges of Implementing the Integrated Disease Surveillance and Response Strategy in Zambia: a health worker perspective. BMC Public Health 2017; 17: 746

C. Relevance to Higher Level Objectives

13. **The Project Development Objective (PDO) is aligned with the World Bank's Country Partnership Framework (CPF, 2019–2024) for Zambia (Report No. 128467-ZA).**[24] The CPF was extended by one year to FY24 and its focus areas and objectives were revised through the Performance and Learning Review (Report No. 181836-ZM). The project will contribute to Objective 3, increased access to health, education, and social protection under Focus Area II, which supports job participation especially for underemployed groups with a focus on long-term human capital investments. Ongoing discussions of the FY25–30 CPF emphasize the need to strengthen resilience in health systems as well.

14. **The project is also aligned with the World Bank strategic priorities and the Government's NHSP for 2022–2026.** Specifically, the project contributes to the World Bank's mission to end extreme poverty and boost shared prosperity on a livable planet and IDA20 commitment to "support at least 25 IDA countries to implement pandemic preparedness plans through interventions (including strengthening institutional capacity, technical assistance, lending and investment)." The project is fully aligned with the 2022–2026 NHSP, which aims to safeguard national public health security by preventing and controlling infectious and non-infectious public health threats in Zambia by 2026. Zambia's participation in the HEPRR Program reflects the GRZ's commitment to intensifying its efforts in responding to and building resilience against public health emergencies. The project will also contribute to Zambia's National Gender Policy 2023 which envisions a multisectoral approach to gender equality, including addressing gender gaps in access to all types of health services.

15. **The project is consistent with both the mitigation and adaptation goals of the Paris Agreement, Zambia's updated Nationally Determined Contribution (NDC 2021),[25] and Zambia's climate and health policies toward reduction of greenhouse gas (GHG) emissions and fostering climate resilience.** Zambia's NDC commits to reduce GHG emissions by 25 percent by 2030 in comparison to a business-as-usual scenario or 45 percent with international support. Zambia's National Adaptation Plan (NAP 2023),[26] National Policy on Climate Change (2016),[27] Health National Adaptation Plan (HNAP, 2017),[28] and the 2022–2026 National Health Strategic Plan (2023)[29] highlight the adverse impacts of climate change and climate hazards on increasing the burden of climate-sensitive diseases and impacts on health infrastructure and outline adaptation and mitigation measures which align with the project activities.

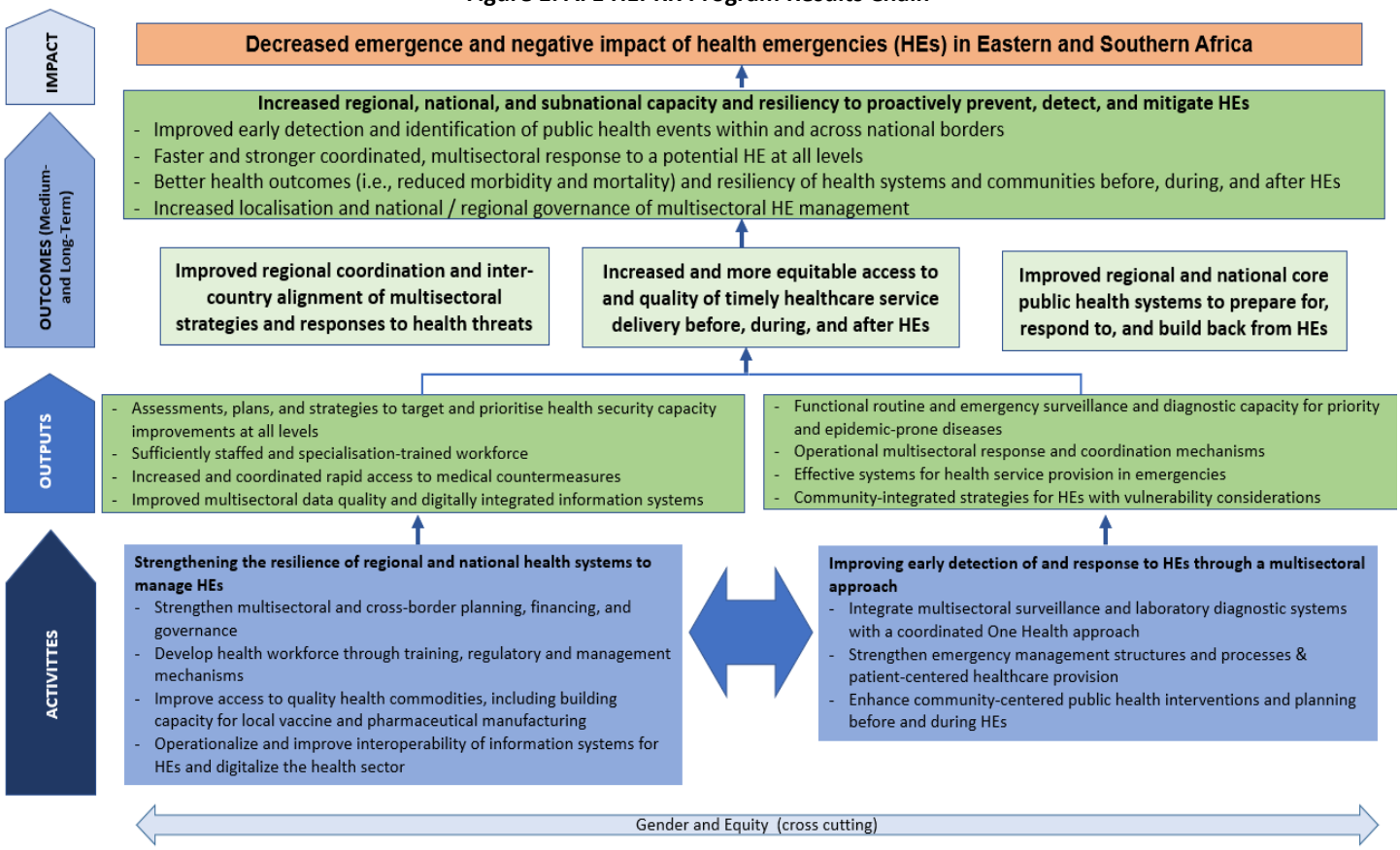
D. Multiphase Programmatic Approach

(i) Program Results Chain

16. The Zambia project will follow the HEPRR Program's Results Chain (unchanged) which emphasizes multisectoral engagement across all core public health, service delivery, and regional coordination capacities and the overall emergency response and management, at all levels of the health system (figure 1).

[24] The CPF was discussed by the Board of Executive Directors on February 14, 2019.
[25] Republic of Zambia (2021) Updated Nationally Determined Contribution.
[26] Republic of Zambia (2023) National Adaptation Plan for Zambia.
[27] Ministry of National Development Planning (2016, April) National Policy on Climate Change.
[28] Zambia Ministry of Health (2017) Health National Adaptation Plan.
[29] Zambia Ministry of Health (2023, February) 2022-2026 National Health Strategic Plan.

Figure 1. AFE HEPRR Program Results Chain



(ii) Program Development Objective and Its Relevance

17. Zambia will contribute to the HEPRR Program's Program Development Objective (PrDO) "to strengthen health system resilience and multisectoral preparedness and response to HEs in Eastern and Southern Africa."

(iii) Updated Program Framework

Table 1. Overview of the Health Emergency Preparedness, Response, and Resilience Program (the 'HEPRR Program) Phases

Phase #	Operation ID	Sequential or Simultaneous	Phase's PDO	IPF or PforR	Estimated IBRD Amount (US$, millions)	Estimated IDA Amount (US$, millions)	Estimated Other Amount (US$, millions)	Estimated Approval Date	Estimated Environmental and Social Risk Rating
1	P180127	Simultaneous	MPA: "To strengthen health system resilience and multisectoral preparedness and response to health emergencies in Eastern and Southern Africa."	IPF	0.00	359.00	0.00	September 29, 2023	Substantial
2	P504532	Simultaneous	Congo Democratic Republic (ZR): "To strengthen health system resilience and multisectoral preparedness and response to health emergencies in the Democratic Republic of the Congo"	IPF	0.00	250.00	0.00	March 29, 2024	Moderate
3	P504531	Simultaneous	Burundi (BI): "To strengthen health system resilience and multisectoral preparedness and response to health emergencies in the Republic of Burundi."	IPF	0.00	50.00	0.00	March 29, 2024	Moderate
4	P504764	Simultaneous	Rwanda (RW): "To strengthen health system resilience and multisectoral preparedness and response to health emergencies in the Republic of Rwanda."	IPF	0.00	120.00	0.00	May 24, 2024	Substantial
5	P505187	Simultaneous	Malawi (MW): "To strengthen health system resilience and multisectoral preparedness and response to health emergencies in the Republic of Malawi."	IPF	0.00	50.00	10.00	June 13, 2024	Moderate
6	P505188	Simultaneous	Zambia (ZM): "To strengthen health system resilience and multisectoral preparedness and response to health emergencies in the Republic of Zambia."	IPF	0.00	50.00	0.00	June 13, 2024	Moderate
7		Simultaneous	New Borrowers	IPF	190.00	431.00	0.00		
Total					190.00	1,310.00	10.00		
				Original approved financing envelope		US$1,000.00			
				Additional financing amount for MPA		US$500.00			
				Total revised overall MPA financing envelope		US$1,500.00			

Note: IPF = Investment Project Financing and PforR = Program for Results.

II. PROJECT DESCRIPTION

A. Project Development Objective

(i) PDO Statement

18. The PDO is to strengthen health system resilience and multisectoral preparedness and response to health emergencies in the Republic of Zambia.

(ii) PDO Level Indicators

19. The PDO will be monitored by measuring progress on the following outcomes (table 2).

Table 2. PDO-Level Indicators

Indicators	Baseline	Year 3/Mid Target	End Target
The average score in 3 JEE technical areas for the Prevent axis	2.6	3.0	4.0
The average score in 3 JEE technical areas for the Detect axis	2.9	3.5	4.0
The average score of 3 JEE technical areas for the Respond axis	2.4	3.0	4.0
% of detected health events, where the country met the 7-1-7 target	0.0	50.0	80.0

B. Project Components

20. **Component 1. Strengthening the Preparedness and Resilience of the Health System to Manage HEs (US$10 million equivalent).** This component will support strengthening of the health system's preparedness and resilience to respond to HEs. The component comprises two subcomponents.

21. **Subcomponent 1.1. Develop health workforce through training, regulatory and management mechanisms (US$5 million equivalent).** This subcomponent will build capacity of the human resources at the PHC and community levels, with a primary focus on health worker capacity for climate emergency preparedness and response, among others, through: (a) updating of training guidelines and manuals to integrate the community event-based surveillance mechanism and climate emergency preparedness and response and implement the integrated community health service package and other related guidelines and standard operating procedures (SOPs) to be developed and updated under subcomponent 2.1; and (b) provision of training: (i) based on the updated training guidelines and manuals and other key existing guidelines including for integrated disease surveillance and response (IDSR), rapid response teams (RRTs), and GBV training, and (ii) to enhance the use of digital tools, complemented by the provision of supporting tools for health workers such as communication devices.

22. **Subcomponent 1.2. Operationalize information systems for HEs and digitalize the health sector (US$5 million equivalent).** This subcomponent includes: (a) expansion of the function of the executive data dashboard that will enable real-time information sharing for informed decision-making by the leadership; (b) developing, implementing, and rolling out a communication platform for health workers to enable real-time communication and strengthen disease surveillance system at the community level; and (c) developing and enhancing e-learning modules and integration into the health worker communication platform. The training modules will be aligned with the Government's training strategy and continuous professional development plans. In addition, this subcomponent will support technical assessments to ensure the smooth rollout, interoperability, and sustainability of these digital solutions. Climate change

preparedness and response is a primary impetus of these activities to allow for rapid, effective response to climate shocks.

23. **Component 2. Improving the Detection of and Response to HEs through a Multisectoral Approach (US$35 million equivalent).** This component will support operational readiness and capacities to respond to HEs. This component has three subcomponents.

24. **Subcomponent 2.1. Strengthen emergency management structures and processes and patient-centered health care provision (US$25 million equivalent).** This subcomponent supports: (a) updating and implementing patient-centered integrated community health service package and other required guidelines and SOPs, for example, business continuity plan for essential health services including RMNCAH-N and NCDs, to support equitable and inclusive access to RMNCAH-N services and NCDs prevention and treatment during an HE; (b) supporting a referral system by (i) developing and gradually operating a digital emergency transport management system which is a platform that enables real-time remote triage and emergency transportation to the nearest available referral health facilities for maternal and neonatal cases along with other eligible emergency cases in a phased approach, and (ii) procuring ambulances along with equipment required for PHC facilities and community health workers (CHAs and CBVs) in line with the 2022-2026 NHSP; (c) developing and implementing standardized national clinical case management guidelines and training packages for priority diseases and health hazards at national and subnational levels, designed to address gender, poverty, and related barriers to access to care in an HE; and (d) ensuring stable service delivery during HEs at the PHC-level facilities (first-level hospitals, urban and rural health centers, and health posts) through, inter alia, new installation and rehabilitation of WASH facilities, solarization and/or electrification of selected health facilities with a consideration of energy efficiency, provision of reliable internet where possible, support for strengthening IPC, and operation and maintenance of selected primary health care level facilities. The WASH activities will consider gender differences in WASH needs and access as relevant. The project will also support enabling environment to respond to HEs and patient-centered health care provision. Emergency management and service continuity during climate shocks is a primary focus of activities within the subcomponent. For all the listed activities, the MoH will engage with other relevant sectors and the local government for appropriate design and implementation mechanisms.

25. **Subcomponent 2.2. Risk communication and community engagement (RCCE, US$4 million equivalent).** This subcomponent will support the devolution agenda of the Government through strengthening mutual accountability between health facilities and communities and local government by engaging multisectoral partners on the ground. It will support: (a) enhancement of a two-way community feedback mechanism and communication channels considering multisectoral approach and gender differences in access and use of media and messaging to inform the multisectoral emergency response strategy and other priorities such as GBV, and (b) strengthening gender-equitable engagement of community members and community structures in defining, developing, evaluating, and reviewing health service delivery (including IPC, WASH, etc.). The subcomponent will focus, among others, on communication with community members regarding climate emergency preparedness and response to address the high vulnerability of the population to HEs including climate change-related ones. Also, it will consider the gender differences in access to, and extent of use of, various mass media such as radio and TV.[30]

26. **Subcomponent 2.3. Climate change adaptive emergency preparedness and response (US$6 million equivalent).** Climate change is mainstreamed throughout the project, and this subcomponent will focus on investments specifically targeted to address the impacts of climate change through proven interventions and investments, especially for climate-adaptive resilient health systems and health care facilities. The subcomponent will finance the following

[30] Murthy, G., and M. M. Hussain. 2010. *Mass Media in Zambia Demand-Side Measures of Access, Use and Reach*.

multisectoral activities: (a) technical assistance for the development of subnational and facility-level climate emergency preparedness and management plans, including for climate adaptive infrastructure; (b) simulations for health workers and administrators on climate and HE preparedness and response at national, decentralized, and community levels; (c) development of an observatory for climate events through the development of a surveillance system by integrating meteorological data, as well as the development and monitoring of a climate and health early warning system, for climate shocks (such as flooding) and climate-sensitive diseases (such as malaria and cholera); (d) technical assistance for developing a national response plan for flooding and drought focused on the prevention of climate-sensitive diseases; (e) conducting risk assessments for climate shocks and climate-sensitive diseases; and (f) technical assistance for developing and implementing WASH climate risk management plan for HEs.

27. **Component 3. Project Management (US$5 million equivalent).** This component will finance strengthening the capacity for monitoring and evaluation (M&E) and project management, including: (a) support for the MPA Program learning agenda (that is, operational research in climate and health, NCDs, and other prioritized areas); (b) procurement, financial management (FM), environmental and social aspects, including strengthening the grievance redress mechanism (GRM), M&E, and reporting, all through the acquisition of goods, provision of technical advisory services, training, and operating costs; and (c) support for cross border-related administrative activities and collaboration with the regional bodies.

28. **Component 4. Contingent Emergency Response.** This component will facilitate access to rapid financing by allowing for the reallocation of uncommitted project funds in the event of a natural disaster in a country, either by a formal declaration of a national emergency or upon a formal request from the Government. Following an eligible crisis or emergency, the Government may request that the World Bank reallocate project funds to support emergency response and reconstruction. This component would draw upon uncommitted resources from other project components to cover emergency response. A CERC Manual and an Emergency Action Plan, acceptable to the World Bank, will be prepared and constitute a disbursement condition for this component.

C. Project Beneficiaries

29. **This project is of national scope and will benefit the 20.4 million inhabitants of the country.** In particular, the project will benefit women in reproductive age, adolescents and children, and population with and at the risk of NCDs through the strengthened and more resilient health system. It will also directly benefit around 2,055 CHAs and 75,000 CBVs as well as the health care workers at the PHC level in the country.

D. Rationale for Bank Involvement and Role of Partners

30. **The World Bank is well positioned to support HEs and health system strengthening in Zambia given the national experience from the ongoing projects and its systematic approach**. Through its investment financing, the World Bank has been one of the leading supporters in HEs. The project will complement the current support for HEs focusing on strengthening the capacity and operation of the ZNPHI by the World Bank and other partners, such as the United States Centers for Disease Control and Prevention (US CDC), the United Kingdom Health Security Agency, and the Japan International Cooperation Agency, and accelerate the Government's effort by enhancing the resilience in health system. The World Bank's holistic approach with scale will help the MoH fill the service and infrastructure gap in PHC and promote comprehensive PHC support on areas including HEs, RMNCAH-N, NCD support, and climate and health. For example, Gavi, the Vaccine Alliance plans to support solarization for 200 health facilities, and the project will cover part of the remaining needs in consultation with the World Bank. Moreover, the country will benefit from the support of the regional entities, the East, Central and Southern Africa Health Community (ECSA-HC) and IGAD under the

MPA, as well as from advanced peer-to-peer learning opportunities available to all countries participating in the HEPRR MPA.

E. Lessons Learned and Progress on Learning Agenda

31. **The implementation of the earlier phases of the HEPRR Program has not yet started or is at the early stage; thus, lessons are yet to be identified.** However, the COVID-19 pandemic and the largest cholera outbreak in 2023–2024 have highlighted the challenges in health system resiliency for service continuity. Zambia experienced substantial disruptions during the COVID-19 pandemic, which reduced antenatal care initiation and fourth visit to 19 percent and 13 percent, respectively,[31] and disruptions in essential service delivery was also observed during the cholera outbreak response. Country experiences emphasized the need for better preparedness and response for service continuity which the project will support. In addition, the project will finance learning activities through operational research on climate and health and NCDs to inform policy decisions and necessary actions. The project will build on the output of the planned analytical work for cybersecurity under the Technical Support for Drone Utilization in Public Health Supply Chain and Diagnostic Services in Zambia (2023-2026) and lessons learned on integrating gender in the Regional Disease Surveillance Systems Enhancement (REDISSE) Project (P154807), and will consider using the Gender in Preparedness and Response (GENPAR) Toolkit developed under REDISSE, among others, in operationalizing the integration of gender in the project.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

32. **The MoH will be responsible for project implementation, including coordination with the ZNPHI.** The Permanent Secretary for Technical Services will be responsible for managing project activities, in line with the technical and administrative mandates, and will closely coordinate with the Permanent Secretaries for Donor Coordination and Administration in line with their respective mandates. By effectiveness, the MoH will establish a Project Implementation Unit (PIU), under the Directorate of Public Health, that will be responsible for: (a) the day-to-day management and execution of project activities, including procurement, FM, environmental and social aspects, M&E, and coordination with the ZNPHI; (b) the preparation of the Annual Work Plan and Budget and Procurement Plan; (c) collection and compiling of all data for specific indicators; and (d) the preparation of consolidated reports on the implementation of the project components. The PIU will also closely collaborate and work with the Directorate of Policy and Planning, Finance, the Procurement Unit, and the Environmental Health Unit. The MoH will recruit or assign staff for the PIU to implement the project activities, including a Project Coordinator, an FM Specialist, a Procurement Specialist, an Environment Specialist, a Social Specialist, and an M&E Specialist. The PIU may also recruit specialized technical staff as needed, and some activities may be outsourced to third parties through contract agreements acceptable to the World Bank. The ZNPHI will implement health security-related activities and provide technical insights on the project activities based on its mandate. The MoH and ZNPHI will also coordinate with other government institutions such as the Electronic Government Division under the Office of the President (Smart Zambia) and the Disaster Management and Mitigation Unit under the Office of the Vice President. A Project Implementation Manual (PIM) acceptable to the World Bank will be adopted not later than 45 days after effectiveness and will contain detailed workflow, methods, and procedures for project implementation. In addition, a Project Steering Committee (SC), with terms of reference acceptable to the World Bank, will be established not later than six months after effectiveness to oversee the project implementation and set the strategic decisions based on the reports submitted by the PIU. The SC will be chaired by the Permanent Secretary

[31] Zambia Reproductive, Maternal, Neonatal, Child and Adolescent Health and Nutrition (RMNCAH-N) Investment Case.

for Technical Services with the membership of Permanent Secretaries for Donor Coordination and Administration and relevant directorates from the Ministry of Finance and National Planning (MoFNP), MoH, ZNPHI, among others, as defined in the PIM. The MoH may use the procurement services offered by the UN agencies to support the procurement of goods and services under the project.

33. **The Regional Advisory Committee (RAC) will serve as the bridge between the HEPRR Program and the overall regional agenda and priorities.** The RAC will consist of representatives of all participating countries and regional bodies that support project implementation, as well as global experts, representatives of the Association, and other entities, as described in the Program Operations Manual. The RAC will provide a forum for broader technical and regional engagement beyond the MPA's focus, with emphasis on ensuring program alignment with the broader regional agenda and strategic direction. In addition, the MoH, through the PIU, will coordinate with ECSA-HC and IGAD, following the MPA framework. Zambia is a member state of ECSA-HC with a recent example of joint implementation of the AFR RI-Southern Africa Tuberculosis and Health Systems Support Project (P155658). Not later than three months after effectiveness, the country will enter into a memorandum of understanding with IGAD, as Zambia is not a member state.

B. Results Monitoring and Evaluation Arrangements

34. **The project's Results Framework includes both the PDO and intermediate results indicators that follow the indicators under the MPA.** Indicators have been selected to assess the effectiveness and impact of project interventions. The PIU will be responsible for: (a) collecting and compiling all data for indicators included in the Results Framework, (b) evaluating the results, and (c) reporting results to the World Bank before each semiannual implementation support mission. The M&E Officer and the Project Coordinator of the PIU will work closely with the Directorate of Policy and Planning, the MoH, and the ZNPHI to collect data from surveys, including JEE. The existing systems will be mainly used to collect data to ensure the sustainability of the project outcomes and timely submission of monitoring data and strengthen the existing system.

C. Sustainability

35. **The project embeds sustainability considerations from the design and implementation perspectives, and continued government commitment is required for financial sustainability.** The interventions are well aligned with the NHSP, and the project's focus on system strengthening will ensure the sustainability of the project by enhancing the capacity of the health workforce and providing them with the necessary tools and environment to sustain service delivery. The phased approach to implementing the planned activities, especially the new digital tools and systems, will enable the MoH to learn lessons from the experience that will be incorporated into the rollout and implementation plan. From an implementation perspective, the focus on the PHC level will support the MoH and the PHC system to strengthen their capacity of service delivery and coordination for HEs under the new decentralized health system. Sustained government stewardship and continued engagement will be required for adequate and sustainable domestic financing to maintain the results.

D. Alignment with Corporate Commitments

36. **Climate change and climate shocks are among the core public HEs that the HEPRR Program addresses and building climate change resilience and preparedness are fundamental program activities.** A summary of the project's Climate Disaster Risk Screening, Climate Vulnerability Context, and Climate Financing, informing climate Co-Benefits, is provided in Annex 2.

37. **Citizen engagement.** The project will identify and differentiate stakeholders, schedule engagement throughout its implementation, specify methods for disseminating information and collecting feedback, and include tailored measures for inclusive participation, particularly for disadvantaged or vulnerable groups, as outlined in the project's Stakeholder Engagement Plan (SEP), disclosed on April 30, 2024. Citizen consultations will build on the RCCE subcomponent and be conducted as part of a baseline survey. Beneficiary satisfaction surveys will be administered twice (at midterm review and at the Implementation Completion and Results Report stages) to gather citizen feedback. Additionally, the existing GRMs will be strengthened and utilized, leveraging existing health sector mechanisms. One indicator, percentage of beneficiaries who are satisfied with project activities disaggregated by gender, in the Results Framework will monitor the effectiveness of citizen engagement.

38. **Gender.** In line with the HEPRR MPA, the Zambia HEPRR project aims to close the gender gaps through its focus on ensuring inclusion of essential RMNCAH-N supplies and services as part of the essential services package during an HE. The development of business continuity plans, including for RMNCAH-N services and overall health system strengthening in this MPA, is expected to build sustainability. Paragraph 12 provides the analysis specifying women's drop in access to RMNCAH-N during an HE. Subcomponent 1.2 addresses the lack of data that would allow surveillance of pregnant women during an HE. Subcomponent 2.1 supports multiple activities to: (a) develop a business continuity plan for essential health services including RMNCAH-N, (b) develop referral services for maternal and neonatal cases, (c) ensure that addressing gender-related and other barriers to access to care is included in standardized national clinical case management guidelines and training packages for HEs, and (d) ensure stable service delivery at the PHC-level facilities including WASH that are designed keeping gender constraints and needs in mind. The following indicators will measure progress: (a) percentage of districts for which national clinical case management guidelines for the priority health events are developed by the project and implemented (dissemination, orientation, and training of health workers on guidelines and compliance/use with the guidelines in practice); (b) an integrated community health service package is newly revised, including noncommunicable diseases, mental health, and maternal and reproductive health services; (c) number of people receiving quality health, nutrition and population services; and (d) including access to RMNCAH-N during an HE (if one occurs in the life of the project) in analysis for the indicator 'Percentage of beneficiaries who are satisfied with project activities disaggregated by gender.' Progress will also be measured via the new indicator for Gender Equality and Equity in the JEE, which measures progress on documenting, addressing, and monitoring success in integrating gender across the 2005 IHR's areas of core competency including essential services. Multiple other gender dynamics of pandemic preparedness and response will also be addressed. The GENPAR toolkit prepared under the REDISSE project will be considered for use to operationalize the project activities.

39. **Data.** The project will maximize the use of available data and will collect additional data only to fill any gaps and/or as required to implement activities under Component 2. When gathering personal data, prior consent will be secured from the participants. Data collection will be carried out in accordance with local laws and international human rights conventions and covenants, respecting cultural sensitivities, such as differences in culture, local behavior and norms, religious beliefs and practices, sexual orientation, gender roles, disability, age and ethnicity, and other social differences. The sourced data will be classified accordingly to ensure there is no misuse or misinterpretation of the data. Data collected under the project will be processed only for the purposes defined in the project.

IV. PROJECT APPRAISAL SUMMARY

A. Paris Alignment

40. **The project is fully aligned with the Paris Agreement on Climate Change.** The project has limited activities which face a moderate level of inherent risk from Zambia's climate hazards such as floods, torrential rains, and extreme

temperatures and integrates measures to reduce risk to the identified activities. Under Subcomponent 2.1, the project will support the installation and rehabilitation of WASH facilities in PHC-level facilities. To reduce the risk of damage by floods, the project will use climate-shock-resilient building design for the rehabilitation of WASH facilities. The project will hire a technical expert to help design climate-shock-resilient WASH infrastructure to avoid damage by floods and contamination of water sources during flooding events. Subcomponent 2.1 will also support solarization for the facilities without stable power supply. Measures will be taken to secure solar panels to reduce the risk of damage from climate shocks. Subcomponent 2.1 will support a digital emergency transport management system which is vulnerable to severe flood and landslide damage, and climate shocks have the potential to obstruct health service delivery and prompt response during extreme events. To reduce this risk, operational guidelines for the system will include procedures for operations during climate shocks and dispatchers will have real-time climate information. The incorporated risk reduction measures are anticipated to reduce the inherent risk to an acceptable residual level which is aligned with the adaptation goals of the Paris Agreement.

41. **Mitigation goal and risk reduction measures.** All project activities are on the list of activities that are universally aligned with the Paris Agreement on Climate Change. WASH renovations will include solar pumps but no other electrical work or installations being undertaken.

B. Economic Analysis

42. **A cost-benefit analysis was used to estimate the project's economic return on investment.** Under the base-case scenario of a 3 percent discount rate, the project is estimated to yield a benefit-cost ratio of 1.94, suggesting that for every US$1 invested, the project will yield an economic return of US$1.94. Over the five years, the net economic benefits generated by the projects' inputs and outputs would result in a positive net present value of US$44.55 million. The estimated benefit is based on the potential impact of investing in preparedness, prevention, and resilience on mortality and morbidity. It does not include the potential impact of a pandemic on the economy due to restricted mobilities and a slowdown of commercial business.

C. Fiduciary

43. The fiduciary framework consists of the FM, disbursements, and procurement with the objectives of: (a) providing reasonable assurance that financing provided by the World Bank is used for the intended purposes with due regard to transparency, economy, efficiency, and effectiveness, and (b) assisting in strengthening FM, disbursement, and procurement capacities of the Government.

44. **Financial management.** In March 2024, the World Bank carried out an FM assessment of the MoH, which is the implementing agency for the project. The FM assessment for the project implementing agency was conducted using the World Bank Guidance: FM Manual for World Bank Investment Project Financing (IPF) Operations, reissued on September 7, 2021. The purpose of the assessment was to evaluate the adequacy of FM arrangements to support project implementation. The objectives of the assessment were to determine whether the MoH has minimum FM arrangements, adequate to ensure that: (a) funds are properly accounted for and used only for the intended purposes in an efficient and economical way; (b) capability exists for the preparation of accurate, reliable, and timely periodic financial reports; (c) internal controls exist which allow early detection of errors or unusual practices as a deterrent to fraud and corruption; (d) the assets are safeguarded; and (e) the project is subject to external audit oversight.

45. **The FM risk rating is Moderate.** The conclusion of the assessment is that the overall project FM arrangements, comprising budgeting, funds flow, accounting, internal controls (including internal audits), disbursements, financial

reporting, and external auditing, satisfy the World Bank's minimum requirements under World Bank Policy and Directive on IPF (effective February 10, 2017), and are therefore adequate to provide, with reasonable assurance, accurate and timely information on the status of the project as required by the World Bank. The FM risk is therefore assessed as Moderate. Details of the FM arrangements are provided in Annex 1.

46. **Procurement.** The World Bank's Procurement Regulations for IPF Borrowers dated September 2023 (Procurement Regulations) and the provisions of the Financing Agreement will apply. Furthermore, the 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 and as of July 1, 2016 (Anti-Corruption Guidelines) will apply. Procurement procedures will be reflected in the procurement section of the Project Implementation Manual.

47. **Procurement risk rating for the project.** The World Bank has conducted a Project Procurement Risk Assessment of the MoH. The assessment covered procurement planning, procurement activities processing, contract management, and related decision-making authority and efficiency for all components under the project as will be carried out by the MoH. The overall procurement risk is Substantial. The rating considers that while the MoH and its institutions have experience implementing several World Bank-funded projects successfully and developed the needed capacity over time, the efficiency of decision-making and payments still require improvement. Sometimes decisions are not made in keeping with contract terms and may negatively impact fairness, transparency, and integrity. Despite these noted shortcomings, overall, the MoH has experience in implementing all aspects of procurement including contract management using the World Bank's Procurement Regulations. Based on the MoH capacity assessment that was carried out in May 2024, using the World Bank's online Procurement Risk Assessment and Management System (PRAMS), a few areas of improvement were identified to be addressed by the MoH during project implementation. These include assigning or recruiting qualified and experienced procurement staff and improving efficiency in decision-making, approvals, and payments, among others.

D. Legal Operational Policies

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

E. Environmental and Social

48. **The environmental risk rating is Moderate**. The project footprint will be confined to the existing MoH-occupied land and will not encroach on environmentally sensitive areas or any areas designated as national parks, game management areas, or critical or natural habitats. The project will involve the construction of small single-story WASH-related infrastructure, water distribution and storage, and appropriately scaled and functional sanitation facilities, for example, the subprojects. The environmental and occupational health and safety risks and impacts are predictable, reversible, and have a low probability of adverse or serious impacts to human health or the environment. A project Environmental and Social Management Framework (ESMF) will be developed and disclosed. The ESMF will describe the process for screening, assessing and managing project-related environmental and social risks.

49. **The social risk rating is Moderate.** Project activities will be implemented nationwide. The primary social risks relate to: (a) the potential exclusion of underserved communities; (b) labor and working conditions; (c) sexual exploitation, abuse, and sexual harassment (SEA/SH); (d) unauthorized exposure of patient data; (e) community health and safety; and (f) challenges in accessing GRMs.

50. **The project will not finance major construction activities**. Minor renovation of infrastructure for climate resilience, construction, and rehabilitation of WASH facilities under Subcomponent 2.1 will be carried out within existing health facilities owned by the Government, which are free of any encumbrances.

51. **The required actions to manage environmental and social risks** outlined in the Environmental and Social Commitment Plan, agreed and dated May 3, 2024, and disclosed on May 7, 2024, include a project ESMF that will detail the necessary national, Good International Industry Practice (GIIP), and other best practices to manage environmental and social risks. An ESMF will be adopted not later than 45 days after effectiveness. Site or area-specific Environmental and Social Management Plans (ESMPs) will be required to accompany bidding documents, and the contractors will submit Contractor's ESMPs or have the mitigation measures detailed in contracts to manage environmental and social risks during the implementation of project activities. The mitigation measures will include, but are not limited to, e-waste management plans, SEA/SH action plans, Labor Management Procedures, management and sourcing of construction materials and waste, ensuring of climate-resilient infrastructure that are codified and linked to approved construction standards, selection of appropriate WASH facilities at each location to ensure sustainability and effective management, and avoidance of the spread of disease and incidents and accidents on the sites.

V. GRIEVANCE REDRESS SERVICES

52. **Grievance Redress.** Communities and individuals who believe that they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the Bank's Grievance Redress Service (GRS), visit http://www.worldbank.org/GRS. For information on how to submit complaints to the Bank's Accountability Mechanism, visit https://accountability.worldbank.org.

VI. KEY RISKS

53. The overall risk of this Zambia project is rated Substantial.

54. **The macroeconomic risk is rated Substantial**, due to Zambia's fiscal challenges which are exacerbated by competing national priorities such as the current cholera outbreak and drought conditions. Nevertheless, the GRZ is initiating structural changes aimed at fostering economic variety and managing inflation, in addition to enhancing social expenditure and investing in the development of human capital. Additionally, the project is designed to specifically address this risk by enhancing the health sector's capacity to more effectively prevent, prepare for, and respond to HEs.

55. **Institutional capacity for implementation and sustainability risk is Substantial**. The MoH will take the primary responsibility for project implementation and coordination with the ZNPHI, and a PIU will be established for this project within the MoH. Past health projects financed by the World Bank encountered challenges due to shortcomings in institutional capacity. Moreover, there has been a gap of three years since the last World Bank-financed project was implemented by the MoH (the Health Services Improvement Project, P145335, closed in December 2020). At the same time, the already weak health system is overwhelmed with the ongoing crises, which may demand significant attention and resources from the MoH. Together with careful monitoring of the situation, the World Bank will provide hands-on support to the MoH during implementation, as needed. The project design emphasizes system strengthening and capacity building to ensure project sustainability. The project implementation period is also set at five years, considering the rate of disbursement under the previous projects, but with an aim to accelerate implementation as much as possible.

56. **Fiduciary risk is Substantial, due to the substantial procurement risk.** The Project Procurement Risk assessment identified that the efficiency of decision-making and payments and keeping contract terms require improvement, even though the MoH and its institutions have experience implementing several World Bank-funded projects successfully and developed the needed capacity over time. The mitigation measures include assigning or recruiting qualified and experienced procurement staff and improving efficiency in decision-making, approvals, and payments, among others. More details are provided in Annex 1.

VII. RESULTS FRAMEWORK AND MONITORING

PDO Indicators by PDO Outcomes

Baseline	Period 1	Closing Period
Strengthen health system resilience & multsectoral preparedness & response to HEs		
The average score in 3 JEE technical areas for the Prevent axis (Number)		
Dec/2023	Dec/2026	Jun/2029
2.6	3.0	4.0
The average score in 3 JEE technical areas for the Detect axis (Number)		
Dec/2023	Dec/2026	Jun/2029
2.9	3.5	4.0
The average score of 3 JEE technical areas for the Respond axis (Number)		
Dec/2023	Dec/2026	Jun/2029
2.4	3.0	4.0
% of detected health events, where the country met the 7-1-7 target (Percentage)		
Dec/2023	Dec/2026	Jun/2029
0	50	80

Intermediate Indicators by Components

Baseline	Period 1	Closing Period
Strengthening the Preparedness and Resilience of the Health Systems to Manage HEs		
People using digitally enabled services (Number of people) CRI		
Dec/2023	Dec/2026	Jun/2029
0	1000	3,000
➢People using digitally enabled services – Youth (Number of people) CRI		
Dec/2023	Dec/2026	Jun/2029
0	500	1000
➢People using digitally enabled services – Female (Number of people) CRI		

Dec/2023	Dec/2026	Jun/2029
0	1500	5000
People benefiting from strengthened capacity to prevent, detect, and respond to health emergencies (Number of people) CRI		
Dec/2023	Dec/2026	Jun/2029
0	3000	10,000
➢People benefiting from strengthened capacity to prevent, detect, and respond to health emergencies – Youth (Number of people) CRI		
Dec/2023	Dec/2026	Jun/2029
0	1000	5000
➢People benefiting from strengthened capacity to prevent, detect, and respond to health emergencies – Female (Number of people) CRI		
Dec/2023	Dec/2026	Jun/2029
0	1500	5000
Percentage of provinces which has at least one trained and functional rapid response team (Percentage)		
Dec/2023	Dec/2026	Jun/2029
0	50	90
Percentage of health facilities with at least one trained health official on IDSR (Percentage)		
Dec/2023	Dec/2026	Jun/2029
40	80	95
➢Percentage of female among the IDSR trainee supported by the project (Percentage)		
Dec/2023	Dec/2026	Jun/2029
0	30	40
Improving the Detection of and Response to HEs through a Multisectoral Approach		
Percentage of districts for which national clinical case management guidelines for priority health events are developed by the project and implemented (Percentage)		
Dec/2023	Dec/2026	Jun/2029
0	40	80
An integrated community health service package is newly revised, including non-communicable diseases, mental health, and maternal and reproductive health services (Yes/No)		
Dec/2023	Dec/2026	Jun/2029
No	Yes	Yes
Score of Joint External Evaluation indicator R5.3 (Community Engagement) (Number)		
Dec/2023	Dec/2026	Jun/2029
3.0	3.2	3.5
Percentage of districts with sub-national-level climate emergency preparedness and management plans (Percentage)		
Dec/2023	Dec/2026	Jun/2029
0	25	50
People receiving quality health, nutrition, and population services (Number of people) CRI		

Dec/2023	Dec/2026	Jun/2029
0	2000	4,500
➢People receiving quality health, nutrition, and population services – Youth (Number of people) [CRI]		
Dec/2023	Dec/2026	Jun/2029
0	500	1000
➢People receiving quality health, nutrition, and population services – Female (Number of people) [CRI]		
Dec/2023	Dec/2026	Jun/2029
0	2000	4500
Project Management		
Percentage of beneficiaries who are satisfied with project activities disaggregated by gender (Percentage)		
Dec/2023	Dec/2026	Jun/2029
0	70	80
Contingent Emergency Response		

Monitoring & Evaluation Plan: PDO Indicators by PDO Outcomes

Strengthen health system resilience and multisectoral preparedness and response to health emergencies in Zambia	
Average score of 3.5 in at least 3 key JEE capacity areas in each axis (Prevent, Detect and Respond)	
Description	See the M&E technical note for the definition of the indicator
Frequency	MPA reporting will be done every six months. JEE assessment will be conducted once before the project closes.
Data source	JEE (Joint External Evaluation Assessment) and IHR States Parties Self-Assessment Annual Report (SPAR)
Methodology for Data Collection	JEE Methodology (3rd edition) and the IHR States Parties Self-Assessment Annual Reporting Tool
Responsibility for Data Collection	The MoH is responsible for organizing and executing the JEE assessment, and for reporting results
% of health events met all three 7-1-7 targets (percentage)	
Description	See the M&E technical note for the definition of the indicator.
Frequency	Every 6 months
Data source	ZNPHI report
Methodology for Data Collection	ZNPHI report
Responsibility for Data Collection	The MoH will be responsible for data collection in collaboration with the ZNPHI.

Monitoring & Evaluation Plan: Intermediate Results Indicators by Components

Strengthening the Preparedness and Resilience of Regional and National Health Systems to Manage HEs	
Number of people benefitting from strengthened capacity to prevent, detect, and respond to health emergencies	
Description	Number of registered community health volunteers and community health assistants, and health workers working at the PHC facilities (district hospitals, zonal health centers, rural/urban health centers and health posts) trained using the updated integrated community health package and other related guidelines and standard operating procedures
Frequency	Every 6 months
Data source	MoH report
Methodology for Data Collection	The MoH will report the status of personnel.
Responsibility for Data Collection	The MoH is responsible for maintaining records of personnel.
Number of people using digitally enabled services	
Description	Number of registered health care workers working in the PHC facilities and community health volunteers using digital system supported by the project (a communication platform and e-learning modules)
Frequency	Every 6 months
Data source	MoH report
Methodology for Data Collection	The MoH will report the status of personnel.
Responsibility for Data Collection	The MoH is responsible for maintaining records of personnel.
Percentage of health facilities with at least one trained health official on IDSR	
Description	Denominator: the total number of health facilities (public and private) Numerator: number of health facilities that met all the following criteria: 1. at least one health official has been trained on IDSR 2. The training comprises of an internationally recognized course, such as the one available from the WHO 3. The trainees have been adequately assessed and certified through internationally recognized processes such as that from WHO

Frequency	Every 6 months
Data source	ZNPHI report
Methodology for Data Collection	Documentation to be submitted
Responsibility for Data Collection	The MoH is responsible for maintaining records of related activities by coordinating with the ZNPHI
Percentage of female among the IDSR trainee supported by the project	
Description	Denominator: the total number of the IDSR trainee supported by the project met the above-mentioned criteria Numerator: number of females
Frequency	Every 6 months
Data source	ZNPHI report
Methodology for Data Collection	Documentation to be submitted
Responsibility for Data Collection	The MoH is responsible for maintaining records of related activities by coordinating with the ZNPHI
Percentage of provinces which has at least one trained and functional rapid response team	
Description	Denominator: the total number of provinces Numerator: number of provinces that met all the following criteria: 1. one rapid response team (RRT) is present 2. The team is functional which the team composition aligned with the country guidance, its members are available to be called upon on short notice and possess the necessary materials and financial resources to mobilize. 3. The RRT members have received internationally recognized training, such as that available from WHO
Frequency	Every 6 months
Data source	ZNPHI report
Methodology for Data Collection	Documentation to be submitted
Responsibility for Data Collection	The MoH is responsible for maintaining records of related activities by coordinating with the ZNPHI
Improving the detection of and response to HEs through a multisectoral approach	
Percentage of districts for which national clinical case management guidelines for priority health events are developed by the project and implemented (dissemination, orientation, and training of health workers on guidelines and compliance/use with the guidelines in practice)	
Description	Denominator: total number of districts Numerator: number of districts that met the following criteria: 1. national clinical case management guidelines for priority health events developed by the project is disseminated 2. orientations and training of health workers on guidelines are conducted 3. compliance/use with the guidelines in practice Gender-related and other barriers to access to care is included in standardized national clinical case management guidelines and training packages for HEs.
Frequency	Every 6 months
Data source	MoH report
Methodology for Data Collection	The MoH to keep the record of dissemination, orientation, training, and monitoring and supervision activities
Responsibility for Data Collection	The MoH is responsible for maintaining records of related activities
An integrated community health service package is newly revised, including non-communicable diseases, mental health, and maternal and reproductive health services (Yes/No)	
Description	A community health package is revised to addresses service delivery in health emergency conditions and to include non-communicable diseases, mental health, and maternal and reproductive health services
Frequency	Every 6 months
Data source	MoH report
Methodology for Data Collection	Documentation to be submitted

Responsibility for Data Collection	The MoH is responsible for maintaining records of related activities
Score of Joint External Evaluation indicator R5.3 ("Community Engagement")	
Description	The country achieved Level 3.5 of JEE indicator R5.3 ("Community Engagement")
Frequency	Every 6 months
Data source	JEE assessment
Methodology for Data Collection	JEE Methodology (3rd edition)
Responsibility for Data Collection	The MoH/ZNPHI is responsible for organizing and executing the JEE assessment, and for reporting results
Percentage of districts with sub-national-level climate emergency preparedness and management plans	
Description	Denominator: the total number of the districts Numerator: the number of the districts that has climate emergency preparedness and management plans developed or revised during the project period
Frequency	Every 6 months
Data source	MoH report
Methodology for Data Collection	The MoH to keep the record of the status of developing the plans
Responsibility for Data Collection	The MoH is responsible for maintaining records of related activities
Number of people receiving quality health, nutrition and population services	
Description	number of service users of the referral system supported by the project for women seeking maternal and newborn care
Frequency	Every 6 months
Data source	MoH
Methodology for Data Collection	The MoH to keep the record of the status
Responsibility for Data Collection	The MoH is responsible for maintaining records of related activities
Project Management	
Percentage of beneficiaries who are satisfied with project activities disaggregated by gender	
Description	The level of satisfaction of the various beneficiaries of the project is collected
Frequency	Every 1 year
Data source	MoH Report
Methodology for Data Collection	A mechanism to collect the level of satisfaction of the various beneficiaries of the project is implemented
Responsibility for Data Collection	MoH

ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Republic of Zambia
Zambia Health Emergency Preparedness, Response and Resilience Project Using the Multiphase Programmatic Approach

Implementation Arrangements

1. The MoH will be responsible for project implementation, including coordination with the ZNPHI. The Permanent Secretary for Technical Services will be responsible for managing project activities, in line with the technical and administrative mandates, and will closely coordinate with the Permanent Secretaries for Donor Coordination and Administration in line with their respective mandates. The ministry will establish a PIU, under the Directorate of Public Health, which will be responsible for: (a) the day-to-day management and execution of activities supported by the project, including procurement support within the government structure and through agreements with UN agencies and coordination support with the ZNPHI; (b) the preparation of the Annual Work Plan and Budget and Procurement Plan; (c) collection and compiling of all data relating to their specific indicators; and (d) the preparation of a consolidated report on the implementation of the project components. The PIU will also closely collaborate and work with the Directorate of Finance, the Procurement Unit, and the Environmental Health Unit. The MoH will recruit or assign staff for the PIU to implement the project activities, including a Project Coordinator, an FM Specialist, a Procurement Specialist, an Environment Specialist, a Social Specialist, and an M&E Specialist. The PIU may also recruit or assign specialized technical staff as needed, and some activities may be outsourced to third parties through contract agreements acceptable to the World Bank.

2. The ZNPHI will provide technical insights on the project activities based on its mandate. The MoH and ZNPHI will coordinate with other government institutions such as Smart Zambia and the Zambia Disaster Management and the Mitigation Unit under the Office of the Vice President.

3. A Project SC will be constituted to oversee the project implementation and set the strategic decisions based on the reports submitted by the PIU. The SC will be chaired by the Permanent Secretary for Technical Services with the membership of Permanent Secretaries for Donor Coordination and Administration along with relevant directorates from the MoFNP, MoH, ZNPHI, among others, as defined in the PIM.

4. The RAC will serve as the bridge between the HEPRR Program and the overall regional agenda and priorities. The RAC, which will be convened by both the ECSA-HC and IGAD, will consist of representatives of all participating countries and regional bodies that support project implementation, as well as global experts, representatives of the Association, and other entities, as described in the Program Operations Manual. The RAC will: (a) ensure close coordination among sub-regional organizations involved in MPA implementation; (b) act as the main mechanism for interregional knowledge exchange and planning; and (c) establish joint mechanisms for monitoring, knowledge generation and sharing, and reporting and record keeping for all countries and partners involved in the MPA. In addition, the MoH through the PIU will coordinate with ECSA-HC and IGAD, following the MPA framework. Zambia and ECSA-HC have a close partnership with a recent example of joint implementation of the AFR RI-Southern Africa Tuberculosis and Health Systems Support Project (P155658). The country will enter into a memorandum of understanding with IGAD, as Zambia is not a member state.

Financial Management

5. The World Bank carried out an FM assessment of the MoH, which is the project implementing agency, in March 2024. The FM assessment for the project implementing agency was conducted using World Bank Guidance: FM Manual for World Bank Investment Project Financing Operations, reissued on September 7, 2021. The purpose of the assessment was to evaluate the adequacy of FM arrangements to support project implementation. The objectives of the assessment were to determine whether the MoH has minimum FM arrangements, adequate to ensure that: (a) funds are properly accounted for and used only for the intended purposes in an efficient and economical way; (b) capability exists for the preparation of accurate, reliable, and timely periodic financial reports; (c) internal controls exist which allow early detection of errors or unusual practices as a deterrent to fraud and corruption; (d) the assets are safeguarded; and (e) the project is subject to external audit oversight. This assessment has concluded that the MoH has basic oversight and FM arrangements to satisfy the World Bank's minimum requirements under the World Bank Procedures.

6. The MoH's FM risk rating after implementation of the mitigation measures is Moderate. The FM assessment identified the following risks: (a) poor record keeping leading to missing supporting documents, (b) unretired imprest which may result in misapplication or wasteful expenditure, and (c) payment of salaries to unknown persons (salaries bounced). To address these risks, the following mitigation measures will be undertaken: (a) improve record keeping by conducting training in records management; (b) ensure regular follow-up on all imprest undertaken and compliance with rules; and (c) ensure all payment are verified, pre-audited, and reconciliation regularly undertaken.

7. **Budgeting.** The budget preparation and monitoring will follow the MoH procedures as the existing budget systems that are in place are deemed adequate. The MoH will budget for all its expenditures under the project using its own budgeting system in such detail as to allow for regular and effective implementation and monitoring of all the activities to be funded. The total project cost and activity work plan will be agreed upfront, and any variations will need prior approval by the World Bank. On an annual basis, the MoH will be preparing the Annual Work Plan and Budget in consultation with the relevant stakeholders from the MoH. The submission to the World Bank for review and no-objection will be made not later than October 31 before the start of the coming financial year. Utilization of the budget will be monitored through the quarterly interim financial reports (IFRs) by analyzing over and underutilizations and using the reports as the management's tool for decision-making.

8. **Disbursements.** The project will be on a statement of expenditure method of disbursement whereby the Designated Account (DA) will have a fixed allocation of funds. The project will report expenditures and request for replenishment of the DA on a monthly basis.

9. The initial disbursement will be on authorized allocation for the project and made into the DA after a withdrawal application from the MoH is submitted to the World Bank via Client Connection. The World Bank will issue a Disbursement and Financial Information Letter to the recipient and the MoH will set out and summarize all the disbursement arrangements and procedures under the project. The letter will include the World Bank 2017 Disbursement Guidelines and the agreed IFR format.

10. **Funds flow.** The project will open a DA at the Bank of Zambia (BOZ) and two project operational bank accounts, one US dollar and the other in Zambian kwacha at a commercial bank acceptable to the World Bank. The funds will flow from the grant account with the World Bank to the DA account based on an application for withdrawal of funds (withdrawal application) prepared by the MoH in Client Connection and submitted to the World Bank. The grant proceeds will flow from the World Bank grant account to the US dollar DA opened at BOZ. From the US dollar DA, funds will be

transferred to the project operational accounts opened at a commercial bank from where payments will be made for eligible expenditures.

1

11. **Accounting.** The MoH will follow its existing accounting policies and use the existing accounting system to record and report on the project transactions. The ministry is connected to the Integrated Financial Information System but will use Microsoft Dynamics Nav (Navision) for project accounting. A chart of accounts which recognizes the different financiers as well as categories and activities is in place. The MoH uses modified cash basis of accounting. For this project, cash basis of accounting will be used. The current staffing level in the Finance Department is adequate and staff have experience in World Bank FM and disbursement procedures.

12. **Internal controls** - **Segregation of duties and documentation controls.** Segregation of duties will be achieved through various approval stages that involve either the Principal Accountant, Chief Accountant, and/or the Director of Finance. For any payment, the accounting will require a payment requisition which indicates the invoice number, services or goods supplied, and other details. The requisition will be signed by various authorizing officers up to the Permanent Secretary, following which a payment voucher will be prepared and processed using established procedures.

13. **Internal audit function.** The MoH has a fully staffed Internal Audit Department headed by the Director of Internal Audit. Recommendations made by the Internal Audit Department are actioned by the Chief Executive Officer who is the Permanent Secretary. In addition, there is an Audit Committee in place, which reviews the audit reports prepared by the internal audit department. The Audit Committee reports directly to the Secretary to the Treasury and reviews and approves the audit work plans.

14. **Financial reporting.** The MoH will prepare and submit the IFRs to the World Bank within 45 days after the end of each calendar quarter in a form and content satisfactory to the World Bank. The PIU will obtain the information from the Financing Agreement on eligible expenditures. The format of the IFR was agreed and included in the Disbursement and Financial Information Letter.

15. **External auditing.** The project audit will be carried out by the Office of Auditor General (OAG). The OAG has qualified and experienced staff who have been conducting audits of World Bank-financed projects. The implementing agency will prepare annual project financial statements at the end of each financial year. The auditors will produce an audit report providing their audit opinion on the project financial statements and provide a Management Letter highlighting areas/issues which will require addressing. The implementing agency will be required to submit the audit report together with the Management Letter to the World Bank not later than six months after the end of the financial year.

16. **FM supervision and implementation support.** The World Bank will conduct semiannual FM supervision. The FM supervision objectives will include ensuring that strong FM systems are maintained for the project throughout its life. Reviews will be carried out regularly to ensure that expenditures incurred by the project remain eligible for the grant funding. The FM supervision would focus on desk reviews, discussions with implementing agencies, and through requesting soft copies of documents. The quarterly IFRs, the internal audit reports, and semiannual audit reports will be used as good source of information for supervision. The World Bank would regularly follow up with the PIU to gather information on the status of FM activities on an ongoing basis.

Table 1.1. FM Supervision Plan

Activity (On-site visits)	Frequency
Review of overall operation of the FM systems	Semiannually during FM supervision missions
Monitoring of actions taken on audit reports, auditors' Management Letters	Continuously
In-depth transaction reviews/ fiduciary deep dive	As required

Procurement

17. **Open National Bidding.** The procurement procedure to be followed for Open National Bidding will be as set forth in the Public Procurement Act of 2023 and the Public Procurement Regulations of 2022. However, such procedures will be subject to the provisions of Section V, Paragraphs 5.3 to 5.6 and 5.7 to 5.9 of the Procurement Regulations.

18. **Project Procurement Strategy for Development (PPSD).** A PPSD prepared by the recipient in April 2024 was approved by the World Bank. The PPSD includes a review the local market's possible response to the procurement activities under the project, summarizes the key contracts to be financed by the project for the initial 18 months, and recommends the most suitable, fit-for-purpose procurement approaches, with the aim of achieving value for money and efficiency, while maximizing the market participation.

19. **Procurement Plan.** The Procurement Plan for the first 18 months was approved by the World Bank. The updated version will be uploaded and approved online through the World Bank's Systematic Tracking of Exchanges in Procurement (STEP). The Procurement Plan will be updated from time to time and will guide the implementation of procurable activities under each of the project components. The processing of these activities will be done in real time through the World Bank's STEP tool.

20. **Prior review of certain procurement under the project.** The World Bank will carry out procurement prior review of all activities which will be identified as being subject of prior review in the procurement plan in STEP. The submissions, reviews and clearances will be carried out online in STEP**.** The World Bank has communicated the prior review and method limits that will apply under the project to the MoH. Documentation for all procurement activities implemented on post review basis will be uploaded for record keeping and data completeness for all procurement activities undertaken under the project. STEP will be used for handling and closure of all procurement complaints. Similarly, the recipient will use the STEP - Contracts Management Module to handle contract management. To this end, the PIU or procuring entities will assign specific staff as contracts managers in the STEP Contracts Management Module.

21. **Procurement risk rating for the project.** The World Bank has carried out a Project Procurement Risk assessment of the MoH, and the overall procurement risk is Substantial. Based on the MoH capacity assessment that was carried out in May 2024, using the World Bank's online Procurement Risk Assessment and Management System (PRAMS), a few areas to be improved were identified and the MoH will address them during project implementation. The improvements include: (i) assign or recruit qualified and experienced procurement staff to support project implementation, (ii) improve the efficiency of decision-making, approvals, and payments, (iii) apply contractual provisions in decision making at all times, (iv) address procurement and contract management decision-making delays, (v) develop a complaints management system for the MoH including systems for timely and fair conclusion of decisions, (vi) address provisions of Section V paragraphs 5.3 to 5.9, conflict of interest and eligibility requirements of the World Bank's Procurement Regulations and include provisions of the World Bank's Anti-Corruption Guidelines in carrying out the project when using national standard solicitation documents, (vii) proactively engage the Ministry of Justice - Attorney Generals Chambers so that reviews and

clearances of draft contracts are carried out in a timely manner, (viii) take preemptive steps requesting bidder compliance with the requirements of the Zambia Revenue Authority (ZRA) on tax compliance to avoid delays at the stage of contractual payments, and (ix) ensure that new staff who will be involved in procurement under the project will receive training in application of the World Bank's Procurement Regulations, STEP, contract management, and aspects of environment and social management that relate to procurement.

ANNEX 2: Climate Change

COUNTRY: Republic of Zambia
Zambia Health Emergency Preparedness, Response and Resilience Project Using the Multiphase Programmatic Approach

1. **The project has been screened for short- and long-term climate disasters and risks and has been found to be highly exposed, while the potential risk to project activities is low.** The major climatic hazards in Zambia are floods, landslides, extreme temperatures, and droughts. Zambia has a predominately subtropical climate characterized by three distinct seasons: a hot and dry season (mid-August to mid-November), a wet rainy season (mid-November to April), and a cool dry season (May to mid-August) .[32] The mean annual temperature for Zambia is 21°C (ranging from 19.3°C to 24.2°C) and has increased by 1.3°C at an average of 0.29°C per decade since 1960. The western province is the hottest with an annual average of 22.1°C.[33] Zambia has experienced an increase in the number of extremely hot days and warm nights, especially in the city Lusaka, but a decrease in the number of extreme cold nights, increasing heat stress risk. In addition to Lusaka, the northern, eastern, central, southern, and western provinces are prone to extreme heat with the western and southern provinces classified as vulnerable to water scarcity and drought prone with impacts on food insecurity and related malnutrition particularly among vulnerable populations.[34] Temperatures are projected to increase by 1.9°C by the 2050s and 2.3°C by the end of the century.[35] The increase in projected temperatures may induce elevated risk of heat-related illnesses and food insecurity among the project beneficiaries. The annual average rainfall in Zambia ranges between 700 mm in the southern province and 1,400 mm in the northern province.[36] All the 10 provinces of Zambia are highly prone to flooding risk. Projections show an increase in precipitation intensity but a decrease in precipitation frequency especially in the northwestern province increasing flood and drought risk with immense impacts on water and vector-borne disease spread and transmission.

2. **Climate change significantly impacts health in Zambia.** Climate change and related changing precipitation patterns are increasing the frequency of extreme heavy rainfall and severe flood events which have increased the outbreak of waterborne diseases (WBDs), particularly acute watery diarrhea and cholera. In Zambia, diarrheal diseases are the third leading cause of death and disability (disability-adjusted life years [DALYs]) particularly among children under five years.[37] In 2016, an estimated 3,000 children under the age of five in Zambia died from diarrhea.[38] Floods, combined with inadequate and poor WASH facilities, and flood damage to sewer and drainage systems are increasing drinking water source contamination, elevating the risk of WBDs in Zambia.[39] Evidence shows that the recent severe cholera outbreak, the worst Zambia has seen in over 20 years, is largely attributable to heavy rains and extreme flooding in the country since late 2023. The heavy rains and floods have damaged pit latrines and flood water has caused overflow of pit latrines,

[32] World Bank – Climate Change Knowledge Portal (2021). Zambia - Climatology.
[33] The Japan International Cooperation Agency. (n.d.) "Climatology."
European Commission. (n.d.) "Climate Change – Zambia."
[34] Global Facility for Disaster Reduction and Recovery. (n.d.). "Think Hazard – Zambia."
[35] Hamududu, B. H., and H. Ngoma. 2019. *Impacts of Climate Change on Water Availability in Zambia: Implications for Irrigation Development.*
[36] World Bank – Climate Change Knowledge Portal (2021). Zambia - Climatology.
[37] Institute for Health Metrics and Evaluation (2022). Zambia..
[38] Koyuncu, A., M. Simuyandi, S. Bosomprah, and R. Chilengi. 2020. "Nutritional Status, Environmental Enteric Dysfunction, and Prevalence of Rotavirus Diarrhoea among Children in Zambia." *PloS one* 15 (10): e0240258.
[39] Alliance For Science. 2024. *Zambia: Cholera Outbreak Linked to Effects of Climate Change*. February 25, 2024.
Gondwe. K. - BBC. (2024, January 30). *Zambia Cholera: Families Grieve as Infection Kills Loved Ones*..

increasing water contamination with fecal matter, triggering a deadly cholera outbreak in Zambia. [40] The recent outbreak of cholera in Zambia which is largely linked to erratic rains, severe flooding, and rising temperatures in the country has caused over 21,950 cholera cases, leading to 715 deaths (as of March 20, 2024) from 9 of the 10 provinces since October 2023. Furthermore, malaria is one of the 10 top leading causes of illness and death in Zambia.[41] According to the Zambia National Malaria Elimination Center, there are approximately 20,000 new malaria cases causing four deaths per day. In Zambia, children under the age of five, expectant women, travelers from malaria non-endemic areas, and people living with AIDS are particularly vulnerable to severe malaria Illness.[42] Evidence from Zambia shows that climatic variables are significantly linked with high malaria cases and deaths particularly among children under five years.[43] Projected increasing temperatures and changing rainfall patterns are anticipated to increase proliferation of malaria vectors in non-endemic areas further worsening spread and transmission in Zambia.[44]

3. **Climate change immensely affects agricultural productivity, worsening food insecurity and malnutrition in Zambia, particularly among rural and poor households.** Heavy rains in January 2023 led to floods especially in the southern province (in the districts of Monze, Namwala, and Bwengwa) and the central province (Mumbwa District) that submerged farmlands destroying crops and livestock triggering food insecurity and poverty in the affected districts.[45] Crop failure due to severe drought conditions caused by failed rains, combined with high food prices, locust infestation, and COVID-19 impacts have further elevated food insecurity in the country.[46] From August to September 2023, an estimated 1.6 million people were classified in the IPC Phase 3 (food crisis), especially in districts in the western, eastern, and Muchinga provinces, and 23 percent of the population (2.04 million people) were projected to experience extreme acute food insecurity between October 2023 and March 2024.[47] In early 2024, Zambia experienced the worst dry spell the country has seen in 40 years, which has been attributed to climate-change-influenced El Niño triggering crop failure, food insecurity, and malnutrition in the country. Due to severe drought conditions, 30 percent of the population (6 million people) in 84 districts are facing extreme food shortages and malnutrition, a dire situation that has led the Government to declare a state of national disaster and emergency.[48]

4. **Climate change has a detrimental impact on Zambia's health system.** Heavy rains in early 2023 triggered floods that damaged and submerged roads and bridges, leading to inaccessibility of health facilities by women, children, the elderly, and people with disabilities and also disrupting health service delivery to flood-prone areas.[49] Heavy rains and extreme flooding in the aftermath of Cyclone Ana severely affected southern Zambia, particularly the districts of Namwala

[40] Think Global Health. 2024. *Zambia's Cholera Outbreak Rings Warning Bells on Climate Change*. March 11, 2024.
Alliance For Science. 2024. *Zambia: Cholera outbreak linked to effects of climate change*. February 25, 2024..
[41] WHO (2024). Health Data Overview for the Republic of Zambia.
[42] Zambia National Malaria Elimination Centre. Malaria Overview.
[43] Lubinda, J., U. Haque, Y. Bi, M. Y. Shad, D. Keellings, B. Hamainza, and A. J. Moore. 2021. "Climate Change and The Dynamics of Age-Related Malaria Incidence in Southern Africa." *Environmental Research* 197: 111017.
[44] Ryan, S. J., C. A. Lippi, and F. Zermoglio. 2020. "Shifting Transmission Risk for Malaria in Africa with Climate Change: A Framework for Planning and Intervention." *Malaria Journal* 19: 1–14.
[45] Davies, R. 2023. "'Catastrophic Situation' after Floods Hit Southern and Central Provinces." January 30, 2023.
[46] Munthali, B. 2024. "Zambia Declares National Disaster over Drought." March 5, 2024.
ACAPS (2023, November 13). Country Analysis Zambia.
[47] Integrated Food Security Phase Classification - IPC (2023, November 13). *Zambia: Acute Food Insecurity Situation for August – September 2023 and Projection for October 2023 – March 2024*. /
[48] Statement on the Drought Response Appeal by the President (April 16, 2024)
[49] IFRC – Zambia. 2023. *Zambia: Flood in Southern Province – DREF Final Report (MDRZM019)*. December 20, 2023.

and Monze cutting off access to health facilities for vulnerable populations and damaging health facilities and other critical infrastructure.[50]

5. **The project intends to implement measures to adapt to the impacts of climate change, primarily floods, in Zambia.** Climate shocks are a major driver of health emergencies in the country. Flooding made up 42.86 percent of average annual natural hazard occurrence in Zambia between 1980 and 2020. In the same period, drought comprised 12.24 percent of natural hazards—hazards that are largely driven by climate change. Epidemics account for 38.78 percent of average annual natural hazard occurrence for 1980–2020.[51] Future projections show that increasing temperatures and precipitation variability will immensely increase the frequency and severity of climate hazards with immense impacts on vector and water-borne disease distribution and abundance. Diarrheal diseases account for 6.34 percent of the total burden of disease while Malaria accounts for 4.56 percent.[52] Taken together, it is estimated that climate change accounts for more than 60 percent of all health emergencies in Zambia. To address the increasing burden of climate-sensitive diseases and the impact of climate hazards on Zambia's health system and health service delivery, the project will integrate adaptation and mitigation measures to prepare and respond to climate health emergencies and build climate resilience of the health system. Details on how climate change will be integrated in the project are outlined in table 2.1 on climate adaptation and mitigation.

Table 2.1. Climate Change Adaptation and Mitigation Activities

Subcomponent	Climate Action
Component 1. Strengthening the Preparedness and Resilience of Regional and National Health Systems to Manage HEs (US$10 million equivalent)	
Subcomponent 1.1. Develop health workforce through training, regulatory and management mechanisms (US$5 million equivalent)	This subcomponent will finance health workforce development to prepare for and respond to climate-induced HEs given that climate is a primary driver of over 60 percent of all HEs in Zambia. These activities will enable the country to promptly respond to the additional disease burden due to climate change particularly from climate-sensitive vector and water-borne diseases (primarily malaria, diarrhea, and cholera) and impacts of climate hazards such as floods, extreme heat, and strong winds on the health system. Specific modules and materials on climate change will be incorporated in all the activities within this subcomponent. • Training guidelines and manuals will be updated to include climate emergency preparedness and response training, which is a primary focus and impetus of this activity. • Training guidelines and manuals will integrate community event surveillance mechanisms on the systematic detection and reporting with a primary focus on climate-sensitive diseases. Climate emergency change is a primary impetus and focus of this activity. • In addition, guidelines and standard operating procedures will be developed to guide the implementation of the community health package which is primarily focused at helping climate vulnerable communities adapt to the additional burden of disease due to climate change and impacts of climate shocks. The materials will have a primary focus on climate change emergency preparedness and response. • The subcomponent will finance training of health workers on climate emergency preparedness and response which is a primary focus and impetus for this activity. There will be specific modules and materials on climate emergency preparedness and response training, which will be a substantive part of the training. **(adaptation)**

[50] ACT Alliance. 2022. "*COP28 Blog: Loss and Damage in Zambia*."
[51] World Bank Climate Change Knowledge Portal. 2021. *Historical Hazards*.
[52] Institute for Health Metrics and Evaluation. Zambia.

Subcomponent	Climate Action
Subcomponent 1.2: Operationalize and improve interoperability of information systems for HEs and digitalize the health sector (US$5 million equivalent)	This subcomponent will support the operationalization and improve the interoperability of information systems and digitalize the health sector to strengthen preparedness and prompt response to HEs. Climate change is the core impetus and primary focus of the following activities and is anticipated to comprise more than 60 percent of all health emergencies in Zambia. Digitalization is being implemented to allow for the agile, accurate response to climate shocks which is extremely difficult with paper-based systems. • Integration of different information systems is being conducted to allow for fast response to climate shocks and climate-sensitive disease outbreaks (such as the recent large cholera outbreak), which is a primary focus of this activity. Subcomponent 2.3 will finance integration of meteorological data with DHIS2, which will be brought together with other platforms in this activity, allowing for overlay of climate data with multiple data sources. • Executive data dashboard strengthening is being conducted for and will have a primary focus on swift and accurate exchange of information to respond to climate shocks and outbreaks of climate-sensitive diseases to support real-time decision-making and enhance climate preparedness, response, and adaptation. Data on climate vulnerable areas will be integrated into the dashboard and the dashboard will have specific analytics on the impacts of climate change on health and climate-sensitive diseases, drawing from the integration of meteorologic data with health data financed by Subcomponent 2.3. • A communication platform is being developed, implemented, and rolled out with a primary focus of real-time coordination and collaboration to rapidly detect and promptly respond to climate shocks and climate-sensitive disease outbreaks which are a leading cause of illness and death in the country. Data and information on climate shocks and climate-sensitive disease outbreaks will be incorporated in the communication platform and this will be updated daily especially during climate shocks. • E-learning modules are being developed with a primary focus on preparedness and response to climate-sensitive diseases and climate shocks which are a primary driver of health emergencies in the country such as the recent cholera outbreak and one of two focus areas of the activity. Trainings on climate shocks, climate-sensitive diseases, climate vulnerable areas, and populations will be in the e-modules. **(adaptation)**
Component 2: Improving the detection of and response to HEs through a multisectoral approach (US$35 million equivalent)	
Subcomponent 2.1. Strengthen emergency management structures and processes and patient-centered health care provision (US$25 million equivalent)	This subcomponent aims to strengthen emergency management structures and patient-centered health provision, with a primary focus on structures for the provision of health care primarily for climate-sensitive diseases and HEs during climate shocks. In the context, climate change is a primary driver of more than 60 percent of all HEs. These activities will help the country deal with the additional burden of climate-sensitive diseases and conditions, emerging and reemerging infectious diseases due to climate change, and climate shocks. Climate change is the primary focus of the following activities: • Patient-centered integrated health care provision and use of alternative care service delivery platforms is primarily being done to support health service delivery and avoid disruption of health care during extreme climatic events like floods and extreme heat which are becoming more frequent and severe in the country. Climate change is a primary focus and impetus of this activity. Specific pathways and provision standards for climate shocks will be developed to guide this activity. • Installation and rehabilitation of WASH facilities is primarily being done to reduce the impacts of climate shocks, particularly floods on the outbreak and spread of WBDs at health facilities in climate vulnerable areas. Floods and droughts are a primary driver of WBDs in the country such as the recent cholera outbreak. Climate change is the primary focus and impetus of this activity. • Support for strengthening IPC operation and maintenance will aim at preventing and containing climate-sensitive WBDs such as cholera, acute watery diarrhea, dysentery in the face of increasing

Subcomponent	Climate Action
	climate change, torrential rains, and extreme flooding. Climate-specific information on monitoring for WBDs during climate shocks will be integrated in the developed manuals and trainings to strengthen IPC control during climate shocks. Climate change is a primary focus and impetus of this activity. • Strengthening policy and regulatory policy will have a primary focus on health service delivery before, during, and after climate shocks and climate-related emergencies primarily in climate shock-prone areas. Policy and regulatory framework will include information and guidelines on preparedness and response before and during climate shocks. **(adaptation)** • The subcomponent will finance solar installations for water pumps at WASH facilities with an estimated cost of US$0.8 million. **(mitigation)** • The subcomponent will finance solarization of health facilities with an estimated cost of US$5 million. **(mitigation)** Climate change is integrated into the following activities: • Patient-centered community health package and required guidelines and SOPs will be updated and implemented to support prevention and treatment of climate-sensitive diseases, RMNCAH-N, and NCDs during climate shocks which are a primary driver of all HEs in the country. • Support for the referral system will closely incorporate climate shock preparedness and response through (a) specific guidelines for referrals during climate shocks within SOPs and (b) integration of meteorological data in the digital emergency transport platform to guide rapid response during climate shocks. • Development and implementation of standardized national clinical case management guidelines and training packages will have a primary focus on climate-sensitive priority diseases and risks, and climate-related health hazards with considerations for gender-specific needs, climate vulnerable groups, and geographic locations. Also, information on climate change impacts on health will be included in the national clinical case management guidelines and training packages to guide the coordination and development of treatment plans for primary climate-sensitive diseases and health hazards. **(adaptation)**
Subcomponent 2.2. Risk communication and citizen engagement (RCCE, US$4 million equivalent)	This subcomponent will support the development of risk communication and citizen engagement activities with a primary focus on climate change, climate shocks, climate-sensitive diseases and risks. Climate change is a primary focus of these activities sand a primary driver of more than 60 percent of all HEs in Zambia. The subcomponent will focus primarily on communication with community members regarding climate emergency preparedness and response to address the high vulnerability of the population to climate change- related health emergencies. • Establishment of a two-way community feedback mechanism and communication channels will primarily focus on communication during climate shocks with specific mechanisms for response to different climate-related health emergencies (floods, high heat, droughts). • The multisectoral emergency response strategy will have a primary focus on climate preparedness and response strategies for climate shocks and climate-sensitive diseases to guide multisectoral response. • In Zambia, women and girls are disproportionately affected by the health impacts of climate change.[53] This subcomponent will finance strengthening gender-equitable engagement of community members and community structures, which is primarily being done to advance meaningful participation of women and men in effective climate response and adaptation. Climate change considerations such as those for climate shocks, impacts on health systems and climate-sensitive diseases will be incorporated in defining, developing, evaluating, and reviewing

[53] Pollock S. (n.d.) *Freeing Zambian Women from a Climate-Charged Poverty Spiral*.

Subcomponent	Climate Action
	of health service delivery with a primary focus in climate vulnerable areas. (adaptation)
Subcomponent 2.3: Climate change adaptive emergency preparedness and response (US$6 million equivalent)	This subcomponent will finance activities entirely focused on climate-change-adaptive emergency preparedness and response in Zambia such as those aimed at responding to climate shocks, impacts on health systems and climate-sensitive diseases, direct injuries, and deaths given that climate change is the driver of over 60 percent of health emergencies in the country. Climate change is the entire impetus and focus of all the activities in the subcomponent. • Facility-level climate emergency and management plans will be developed to support facilities in responding to climate shocks. • Simulations for health workers and administrators will primarily focus on climate emergency preparedness and response will focus entirely on climate shocks and climate-sensitive diseases to help health workers effectively prepare for these shocks. • This subcomponent will finance the development of an observatory for climate events. The activity will include the development of a surveillance system integrating meteorological data and monitoring of climate and health early warning system to enhance the capacity of the health system to prepare for and respond to climate shocks and climate-sensitive diseases. • The national response plan for flooding and drought will help the country effectively prepare for these emergencies, with a focus on preparing for and responding to the additional burden of climate-sensitive diseases due to climate shocks. • This subcomponent will finance risk assessments for climate shocks and climate-sensitive diseases to help the country more effectively prepare for the impacts of climate change. • A WASH climate risk management plan is primarily being developed to respond to climate change. Climate change is the primary focus of this activity which will include guidelines to ensure that WASH infrastructure are resilient to climate shocks particularly Zambia's severe flood, focusing on the additional burden of disease from climate change. **(adaptation)**
Component 3: Project Management (US$5 million equivalent)	
Component 3: Project Management	This subcomponent will manage and monitor the project's climate change activities and will be assessed at the same rate as the project's other climate activities. **(adaptation)**