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Report No: PAD4430

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED GRANT

IN THE AMOUNT OF SDR 36 MILLION
(US\$50 MILLION EQUIVALENT)

AND A PROPOSED CREDIT
IN THE AMOUNT OF SDR 36 MILLION
(US\$50 MILLION EQUIVALENT)

AND A PROPOSED GLOBAL FINANCING FACILITY FOR WOMEN, CHILDREN AND ADOLESCENTS
GRANT
IN THE AMOUNT OF US\$32 MILLION

AND A PROPOSED HEALTH EMERGENCY PREPAREDNESS AND RESPONSE FUND GRANT
IN THE AMOUNT OF US\$2.9 MILLION

TO THE
REPUBLIC OF MADAGASCAR
FOR A

PANDEMIC PREPAREDNESS AND BASIC HEALTH SERVICES DELIVERY PROJECT

MARCH 7, 2022

Health, Nutrition and Population Global Practice
Eastern and Southern Africa Region

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CURRENCY EQUIVALENTS

Exchange Rate Effective January 31, 2022

Currency Unit = Malagasy Ariary (MGA)

MGA 3,992.02 = US\$1

US\$1 = SDR 0.72

FISCAL YEAR

January 1 – December 31

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ABBREVIATIONS AND ACRONYMS

AMR	Antimicrobial Resistance
AWPB	Annual Work Plan and Budget
CDC	Centres for Disease Control and Prevention
CERC	Contingent Emergency Response Component
CNARP	Centre National d'Application des Recherches Pharmaceutiques (National Center for the Application of Pharmaceutical Research)
CNRE	Centre National de Recherches sur l'Environnement (National Environmental Research Center)
CPF	Country Partnership Framework
COVID-19	Coronavirus Disease 2019
CSAJ	Centre de Santé Amis des Jeunes (Youth-friendly Health Care Facility)
CSB	Centre de Santé de Base (Primary Health Care Facility)
CSO	Civil Society Organization
DAF	Department of Financial Affairs
DEC	Development Economics
DFIL	Disbursement and Financial Information Letter
DHIS2	District Health Information Software 2
DHS	Demographic and Health Survey
DPO	Development Policy Operation
DRH	Department of Human Resources
ECF	Extended Credit Facility
E&S	Environmental and Social
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESS	Environmental and Social Standards
EU	European Union
EVD	Ebola Virus Disease
FM	Financial Management
FP	Family Planning
Gavi	The Vaccine Alliance
GDP	Gross Domestic Product
GFF	Global Financing Facility for Women, Children and Adolescents
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (German Agency for International Cooperation)
GM	Grievance Mechanism
GRS	Grievance Redress Service
HCI	Human Capital Index

HEPRTF	Health Emergency Preparedness and Response Trust Fund
HRH	Human Resources for Health
HRM	Human Resources Management
IBRD	International Bank for Reconstruction and Development
IC	Investment Case
IDA	International Development Association
IHR	International Health Regulations
IMF	International Monetary Fund
IMVAVET	Institut Malgache des Vaccins Vétérinaires (Malagasy Institute of Veterinary Vaccines)
IPF	Investment Project Financing
JEE	Joint External Evaluation
LIMS	Laboratory Information Management System
LMICs	Lower-middle-income countries
LMP	Labor Management Procedures
NAPHS	National Action Plan for Health Security
NPHI	National Public Health Institute
M&E	Monitoring and Evaluation
MICS	Multiple Indicators Cluster Survey
MoF	Ministry of Finance
MoPH	Ministry of Public Health
MPA	Multiphase Programmatic Approach
OIE	World Organization for Animal Health
PAD	Project Appraisal Document
PARN	Projet d'amélioration des résultats nutritionnels (Improving Nutrition Outcomes Project using the Multiphase Programmatic Approach)
PBC	Performance-Based Condition
PCU	Project Coordination Unit
PDO	Project Development Objective
PEF	Pandemic Emergency Financing Facility
PFM	Public Financial Management
PHC	Primary Health Care
PNDRHS	Plan National de Développement des Ressources Humaines en Santé (National Health Human Resources Development Plan)
PPE	Personal Protective Equipment
RISLNET	Regional Integrated Surveillance and Laboratory Network
RMNCAH-N	Reproductive, Maternal, Neonatal, Child and Adolescent Health and Nutrition
PVS	Performance of Veterinary Services
SDI	Service Delivery Indicator
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment

SEP	Stakeholder Engagement Plan
STEP	Systematic Tracking of Exchanges in Procurement
UHC	Universal Health Coverage
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Programme
WHO	World Health Organization
WFP	World Food Programme

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Madagascar	Pandemic Preparedness and Basic Health Services Delivery Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P174903	Investment Project Financing	Substantial

Financing & Implementation Modalities

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

Expected Approval Date	Expected Closing Date
29-Mar-2022	30-Jun-2026

Bank/IFC Collaboration

No

Proposed Development Objective(s)

To strengthen cross-sectoral capacity for pandemic preparedness and response and improve the provision of basic health services and quality of care

Components

Component Name	Cost (US\$, millions)
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Component 1: Strengthening Capacities for Pandemic Preparedness and Response	60.00
Component 2: Strengthening the Resilience and Performance of Basic Health Services	64.90
Component 3: Project Management and Monitoring	10.00
Component 4: Contingent Emergency Response	0.00

Organizations

Borrower: Republic of Madagascar
 Implementing Agency: Ministry of Public Health

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	134.90
Total Financing	134.90
of which IBRD/IDA	100.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	100.00
IDA Credit	50.00
IDA Grant	50.00

Non-World Bank Group Financing

Trust Funds	34.90
Global Financing Facility	32.00
Health Emergency Preparedness and Response Multi-Donor Trust	2.90

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount



Madagascar	50.00	50.00	0.00	100.00
National PBA	50.00	50.00	0.00	100.00
Total	50.00	50.00	0.00	100.00

Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2022	2023	2024	2025	2026	2027
Annual	2.00	35.00	30.00	35.00	30.00	2.90
Cumulative	2.00	37.00	67.00	102.00	132.00	134.90

INSTITUTIONAL DATA**Practice Area (Lead) Contributing Practice Areas**

Health, Nutrition & Population

Climate Change and Disaster Screening

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

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

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



10. Overall

● Substantial**COMPLIANCE****Policy**

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

Yes No

Does the project require any waivers of Bank policies?

Yes No

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

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

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



Legal Covenants

Sections and Description

Financing Agreement. Schedule 2, Section I, A.3. Institutional Arrangement. The Recipient shall recruit no later than three (3) months after the Effective Date: (a) one dedicated focal point; (b) one procurement specialist; (c) one financial management specialist; (d) one accountant; and (e) one monitoring and evaluation specialist; all with qualifications, experience and under terms of reference acceptable to the Association.

Sections and Description

Financing Agreement. Schedule 2, Section I, A. 4. Institutional Arrangement. The Recipient shall establish no later than one (1) month after the Effective Date, and thereafter maintain, a Multisectoral Steering Committee for the Project, with mandate, composition, resources and terms of reference satisfactory to the Association as further set out in the Project Implementation Manual, involving representatives from key ministries and stakeholders relevant to the Project, and entrusted inter alia with strategic and policy guidance and approval of Annual Work Plans and Budgets.

Sections and Description

Financing Agreement. Schedule 2, Section I, B.1. Project Implementation Manual. The Recipient shall prepare no later than one (1) month after the Effective Date, or any later date agreed upon in writing with the Association, and maintain, in accordance with terms of reference acceptable to the Association, a Project Implementation Manual, containing detailed arrangements and procedures for: (a) institutional coordination and day-to-day execution of the Project, including key milestones in Project implementation; (b) monitoring, evaluation, reporting and communication; (c) administration, financial management, procurement and accounting, including the Anti-Corruption Guidelines; (d) eligibility criteria, modalities, terms and conditions, and procedures for preparation, targeting, approval, payment, verification, monitoring, evaluation, reporting and auditing of Subgrants; (e) modalities, procedures, amounts and verification mechanisms for payment of Incentive Packages and Performance-Based Conditions; (f) environmental and social aspects; (g) Personal Data collection, in accordance with applicable national law and best international practices; and (h) such other administrative, technical and organizational arrangements, and procedures as shall be required for purposes of implementation of the Project (the "Project Implementation Manual").

Sections and Description

Financing Agreement. Schedule 2, Section I, C.1 (b). Financing of Eligible Expenditures under Part 2.3 (b) of the Project based on Performance-Based Conditions. For purposes of carrying out each such verification, engage not later than six (6) months from the Effective Date, an independent verification agent, with terms of reference, qualifications and experience satisfactory to the Association

Sections and Description

Financing Agreement. Schedule 2, Section IV, A.1. Financial Management. The Recipient shall: (a) prepare the terms of reference for the recruitment of an external auditor, in form and substance satisfactory to the Association, no later than one (1) month after the Effective Date; (b) thereafter recruit an external auditor in accordance with the Procurement Regulations, not later than three (3) months after the Effective Date; (c) recruit a fiduciary agent to include the Project, under terms of reference, qualifications and experience satisfactory to the Association, no later than three (3) months after the Effective Date; (d) recruit an internal auditor for the Project with terms of reference, qualifications and experience satisfactory to the Association, no later than three (3) months after the



Effective Date; and (e) implement recommendations from an upcoming governance audit of the Project Coordination Unit throughout Project implementation, in form and substance satisfactory to the Association.

Sections and Description

Financing Agreement. Schedule 2, Section I, G.1 (b). Annual Work Plans and Budgets. Furnish to the Association, as soon as available, but in any case not later than November 30 of each year, the annual work plans and budgets approved by the Multisectoral Steering Committee, for the Association's review and approval; except for the annual work plan and budget for the Project for the first year of Project implementation, and the evidence which may be required for the implementation of the activities included in the draft annual work plan and budget for such period which shall be furnished no later than one (1) month after the Effective Date.

Conditions

Type Effectiveness	Financing source IBRD/IDA	Description <p>The Additional Condition of Effectiveness consists of the following, namely that the ESMF shall have been disclosed by the Recipient, in form and substance satisfactory to the Association, in accordance with the ESCP. [Article IV, 4.01]</p>
Type Disbursement	Financing source IBRD/IDA	Description <p>Under Category (2), until and unless the Recipient has furnished evidence satisfactory to the Association that: (i) the National Health Financing Strategy and its operational plan have been adopted by the Recipient in form and substance satisfactory to the Association; (ii) Eligible Expenditures have been incurred; and (iii) the related PBC set forth in Schedule 4 to this Agreement for which withdrawal is requested has been met and verified in accordance with the verification protocol set out in the Project Implementation Manual. [Schedule 2, Section III, B, (b)]</p>
Type Disbursement	Financing source IBRD/IDA	Description <p>Under Category (3), until and unless all of the following conditions have been met in respect of said expenditures, namely that: (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 (3); and (B) the Association has agreed with such determination, accepted said request and notified the Recipient thereof; and (C) the Recipient has adopted the CERC Manual and Emergency Action Plan, in form and substance acceptable to the Association. [Schedule 2, Section 3, B, (c)]</p>



Type	Financing source	Description
Effectiveness	Trust Funds	This Agreement shall not become effective until: (a) the ESMF shall have been disclosed by the Recipient, in form and substance satisfactory to the Bank, in accordance with the ESCP; and (b) evidence satisfactory to the Bank has been furnished that the execution and delivery of this Agreement on behalf of the Recipient have been duly authorized or ratified, and that this Agreement is legally binding upon it in accordance with its terms. [Article V, 5.01]



I. STRATEGIC CONTEXT

A. Country Context

1. According to 2020 Human Capital Index (HCI)¹ estimates, a child born today in Madagascar will be only 39 percent as productive as they could have been as an adult had they enjoyed complete education and full health. Worse, Madagascar's HCI trendline² has remained unchanged over the last decade. Ninety-seven percent of 10-year-old children cannot read or understand a basic text, 40 percent of children are stunted, and social protection services cover just 3 percent of those living in extreme poverty. Although the under-5 child mortality rate and the prevalence of stunting have improved since 2010, these remain among the highest worldwide. Similarly, although the adult survival rate has improved, it is still among the lowest quarter of all countries. The picture for education is concerning, with quality decreasing (as reflected in harmonized test scores) and primary educational completion rates falling to 63 percent in 2019 (from 68 percent in 2013). All key components of the HCI show strong inequalities by income; test scores indicate a two-tier education system, with one level of quality for the richest and another for everyone else. With children unable to reach their potential, the country will not have the labor force required to fuel a productive economy that can create jobs, boost prosperity, and reduce poverty in the long term.
2. Madagascar's economy was on a modest growth trajectory before the Coronavirus Disease 2019 (COVID-19) global pandemic. The economic recovery that began in 2013 gradually strengthened until 2019, supported by a return to political stability that helped restore investor confidence, reopen access to Madagascar's main export markets, restore concessional finance flows, and encourage structural reforms. Despite this positive momentum, real Gross Domestic Product (GDP) growth peaked at a still-modest 4.4 percent in 2019, averaging 3.5 percent in 2013–19.³ This growth rate barely exceeded population growth and was insufficient to ensure rapid poverty reduction.
3. The pandemic led to the deepest recession since 2002 and reversed more than a decade of progress in poverty reduction.⁴ The initial impact of the COVID-19 crisis was severe. With export earnings and investment collapsing, GDP contracted by 6.2 percent in 2020, the sharpest decline in two decades. A second wave of the pandemic in 2021—and continued border closures—delayed recovery, with GDP growth estimated at 1.8 percent in 2021. The mining, tourism, textile, and transport industries were hit hardest by this crisis, while domestically-oriented sectors were negatively impacted by falling household incomes and supply chain disruptions. Overall, income per capita fell by about 10 percent between 2019 and 2021, representing the most intense economic shock since the crises of 1991 and 2002. Additionally, the climate change-induced drought, amplified by outbreaks of Rift Valley Fever and migratory locusts, has spurred a food crisis in the South, driving nearly 50 percent of the population (1.3 million people) from the region's ten hardest-hit districts into acute food insecurity.⁵ In this

¹https://worldbankgroup.sharepoint.com/sites/wbsites/HumanCapital/Documents/HCI%20Index%202020%20by%20region%20and%20country/Sub-Saharan%20Africa%20-%20East/HCI_2pager_MDG.pdf - *HCI 2020: Country briefs by region – Africa East - Madagascar*

² <http://mics.unicef.org> - Madagascar MICS 2018, except stunting rate from Demographic and Health Survey 2021.

³ World Development Indicators: <https://databank.worldbank.org/source/world-development-indicators>

⁴ 2022 Systematic Country Diagnostic (SCD) Update for Madagascar (document not yet public).

⁵ For more information, see <https://www.wfp.org/news/climate-magnifies-hunger-madagascar-forecasted-poor-rains-bring-dread-and-despair>; <https://news.un.org/en/story/2021/10/1103712>; <https://reliefweb.int/report/madagascar/climate-magnifies-hunger-madagascar-forecasted-poor-rains-bring-dread-and-despair>.



context, the poverty rate is estimated to have increased from 76.5 percent in 2019 to 80.7 percent in 2020, and further to 81.1 percent in 2021. As a result, nearly two million people have fallen below the international poverty line of US\$1.90/inhabitant/day (in 2011 purchasing power parity) in two years. The crisis has also negatively affected access to social services.

4. Maternal, neonatal, and infant mortality rates have improved over the past decade but remain persistently high. Between 2008 (Demographic and Health Survey [DHS] 2008–09) and 2018 (Multiple Indicators Cluster Survey [MICS] 2018), the maternal mortality ratio fell from 498 to 426 deaths per 100,000 live births, a reduction of just over 14 percent. The neonatal mortality rate decreased from 26 to 19 per 1,000 live births (by 27 percent) between 2008 and 2018. However, it increased to 26 per 1,000 live births in 2021, according to DHS 2021 results. Madagascar's infant mortality rate also decreased, from 48 to 40 per 1,000 live births (by 17 percent) between 2008 and 2018, but rose to 47 per 1,000 live births in 2021 (DHS 2021). Only 39 percent of deliveries occurred within a health facility in 2018 (MICS 2018), and this percentage remained the same in 2021 (DHS 2021). The rate of deliveries assisted by skilled medical professionals has not improved much over the last ten years, rising only slightly from 43.9 percent in 2008 to 44.3 percent in 2012 and 46 percent in 2018; no change was observed in 2021 (DHS 2021). This stagnation is due to multiple reasons, including the limited number of skilled health workers, the distance to medical centers combined with the lack of transportation in rural areas, and a preference for traditional births.

5. The fertility rate remains high at 4.2 children per woman, driven by a high adolescent fertility rate of 143 per 1,000 women aged 15–19 (DHS 2021). Despite improvements, access to reproductive health services and family planning for women and girls remains problematic. Overall, 15 percent of women currently in union have unmet needs for family planning. Just over two in five women in union use a modern contraceptive method (43 percent). If all unmet needs were met, contraceptive prevalence could reach 64 percent among women in union (expressed need). Utilization of contraception is the lowest at 37.5 percent among adolescents. Yet almost one-third (31 percent) of adolescents have already begun their reproductive lives (27 percent have had a live birth, and 5 percent are pregnant with their first child). These trends are explained by social and cultural norms that consider the number of children born as wealth and, in many regions, encourage early sexuality and marriage for girls. However, early pregnancies increase the risk of maternal mortality among adolescent girls and also affect their prospects for continued schooling and future employment.

6. Madagascar faces a range of climate shocks, increasing in frequency and intensity due to climate change and characterized by annual cyclones and floods. Over 30 floods or heavy rainfall events affected Madagascar in the past 30 years, killing thousands of people and affecting hundreds of thousands. Madagascar has one of the highest cyclone risks in Africa, averaging 3–4 cyclones per year, a figure that is expected to increase due to rising global temperatures and the subsequent increasing ocean temperatures. Cyclones bring torrential flooding, resulting in severe damage and losses across sectors. The 2008–09 DHS found that 49 percent of households were affected by a cyclone, flood, or drought in the year preceding the survey (the 2021 DHS did not ask this question). Simultaneously, the southern part of Madagascar is plagued by persistent, climate change-induced drought, spurred by increasingly high temperatures and low rainfall, leading to reduced harvests and an increase in malnutrition and childhood diseases. In addition, the country has had extensive deforestation, with between 40 and 90 percent of its natural forests destroyed, threatening the natural habitat of the country's



diverse indigenous animal population. Reduced animal habitats and more contacts with humans also increase the risk of emerging zoonotic diseases.

7. **Madagascar is highly vulnerable to infectious disease outbreaks; the climate change context amplifies this risk.** Like the other African countries, Madagascar has experienced severe infectious disease outbreaks over the last five years. The country was also affected by a measles epidemic that lasted almost 17 months between August 2018 and December 2019. In 2015, the country faced a polio outbreak due to vaccine-derived strains of poliovirus.⁶ Malaria is a substantial health threat, with an estimated 2.16 million cases and 50,000 deaths in 2018. Climate change is expected to increase the duration, scope, and intensity of malaria outbreaks through increased temperatures and rainfall creating optimal mosquito conditions in the country and expanding transmission areas.⁷ In 2017, Madagascar experienced a record level pneumonic plague outbreak affecting two densely-populated cities, including the capital, Antananarivo, with 2,417 reported cases and 209 deaths having considerable health and socioeconomic consequences.⁸ Plague is endemic in Madagascar; the bubonic plague is most common, resulting in small, isolated outbreaks. The rapid spread of pneumonic plague in the country has been linked to optimal climatic conditions allowing rat populations, the vectors of the infection, to thrive.⁹ In 2019, plague was reported in parts of the country that were not previously impacted by the disease with a likely climatic link underpinning the change in transmission patterns. A new surge of plague cases was reported in August 2021. Along with known climate-related infectious diseases, given Madagascar's high level of climate vulnerability, it is also at risk of climate-related emerging infectious diseases. Zoonotic diseases are a particular risk in the context of high biodiversity and decreasing natural habitats, resulting in increased interaction between animals and humans.¹⁰

B. Sectoral and Institutional Context

COVID-19 Situation and Response in Madagascar

8. **Madagascar declared a state of health emergency due to the COVID-19 pandemic (decree 2020-359 of March 21, 2020) and has since repeated issuing and lifting health emergency declarations.** The authorities lifted the first health emergency on October 18, 2020. However, it was reinstated in early April 2021 due to the second wave (decree 2021-390 of April 3, 2021) and lifted again on September 4, 2021. As of February 22, 2022, Madagascar reported 63,575 cases and 1,366 official deaths since the outbreak's start. The first cases (three cases, all imported) were confirmed on March 20, 2020, and a first peak was reached in July/August 2020 when

⁶ WHO, Poliovirus in Madagascar, Disease Outbreak News, July 24, 2015

⁷ [⁸ Nguyen VK, Parra-Rojas C, Hernandez-Vargas EA. The 2017 plague outbreak in Madagascar: Data descriptions and epidemic modelling. *Epidemics*. 2018 Dec;25:20-25.](https://www.jstor.org/stable/pdf/26808340.pdf?refreqid=excelsior%3A251444975393388b13d4a4acec7e2062&ab_segments=&origin=World Bank, Madagascar Climate Change and Health Diagnostic, Risks and opportunities for climate-smart health and nutrition investments, Investing in climate change and health series, 2018</p></div><div data-bbox=)

⁹ United States Agency for International Development, Plague in a changing environment, a literature review for Madagascar, September 2019;

Alderson, J., Quastel, M., Wilson, E., & Bellamy, D. (2020). Factors influencing the re-emergence of plague in Madagascar. *Emerging topics in life sciences*, 4(4), 411–421.

¹⁰ <https://bassconnections.duke.edu/project-teams/how-do-people-affect-zoonotic-disease-dynamics-madagascar-2018-2019;Ruwini Rupasinghe, Bruno B. Chomel, Beatriz Martínez-López, Climate change and zoonoses: A review of the current status, knowledge gaps, and future trends, Acta Tropica, Volume 226, 2022;>

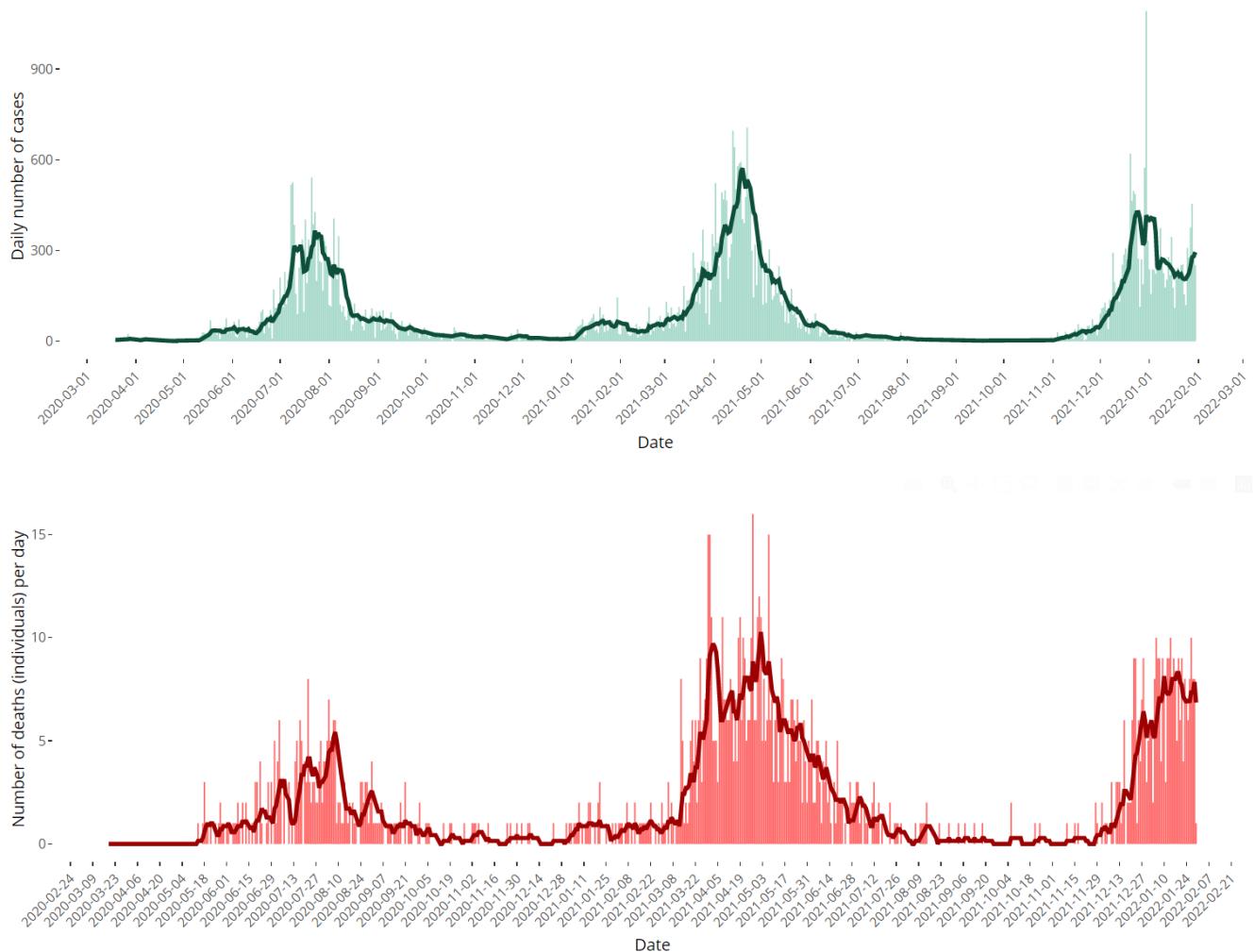
Clark M, Deforestation in Madagascar: Consequences of population growth and unsustainable agricultural processes, *Global Majority E-journal*, Vol.3, No. 1 (June 2012)



the number of cases rose fourfold in one month, with the highest number of new cases reaching 360 per day. Although Antananarivo experienced the greatest impact, all of Madagascar's 22 regions were affected. The epidemiological situation worsened with the presence of the Delta variant that hit Madagascar in March–April 2021, resulting in over 600 new daily cases (and peaking on April 14, 2021, with 854 new cases). The death rate also increased; it is now estimated at 2.14 percent compared to 1.4 percent in 2020. Figure 1 below illustrates the evolution of COVID-19 outbreak in Madagascar since March 2020 (new cases and deaths). As of February 28, 2022, 4,289,060 vaccine doses had arrived in Madagascar, of which 1,438,272 had been administered; 991,866 individuals (around 3.4 percent of the total population) had been fully vaccinated.

Figure 1. Evolution of COVID-19 Outbreak in Madagascar, March 2020–January 2022

Number of new cases and deaths per week



Source: Dashboard available online based on public official national COVID-19 data,
https://www.covid19mg.org/dashboard_fr.html



9. **The government, with partner support, prepared an emergency contingency plan for COVID-19 before Madagascar's first cases were confirmed.** The World Bank responded swiftly to provide financial support to ensure preparedness for COVID-19 by triggering the Contingent Emergency Response Components (CERC) of the Improving Nutrition Outcomes Project (PARN-P160848) Using the Multiphase Programmatic Approach (MPA) on April 3, 2020, for US\$20 million. The World Bank's support and involvement acted as a catalyst to accelerate preparedness and response. In response to increasing needs and financial gaps as the pandemic worsened, the government developed and validated a Multisectoral Social Emergency Plan. The Council of Ministers approved a health response plan, part of this multisectoral plan, on July 1, 2020. Additional financial support for health response was provided by triggering the CERC of existing projects in the World Bank's Madagascar portfolio on September 3, 2020, adding US\$40 million to the health sector.¹¹ Main strategies for the health response include (i) coordination; (ii) strengthening disease surveillance system, including at the community level, and contact tracing; (iii) developing and strengthening testing capacities (network of laboratories equipped and personnel trained); (iv) ensuring management of positive cases in hospitals and primary health care facilities (training of staff, equipment, and PPEs) and ensuring continuity of essential health services (such as immunization and safe deliveries); (v) logistical support (transfers of drugs and inputs, ambulances, waste management, and so on); and (vi) communication at all levels to prevent disease spread. In addition to World Bank financing, other development partners are also contributing to finance interventions under this plan, such as the UN agencies (United Nations Children's Fund : UNICEF, World Health Organization: WHO, United Nations Population Fund: UNFPA, United Nations Development Programme: UNDP), multilateral agencies (Gavi, the Vaccine Alliance, and Global Fund), and bilateral partners.¹²

Critical Areas to Address Weaknesses in Pandemic Preparedness and Response

10. **The COVID-19 pandemic highlights the need for Madagascar to strengthen its disease outbreak preparedness and response capacities.** A Joint External Evaluation (JEE), which assessed Madagascar's International Health Regulations (IHR 2005) core capabilities in July 2017,¹³ highlighted some strengths related to relevant operational capacities as well as some major weaknesses (Table 1).

Table 1. Summary of the 2017 Joint External Evaluation

Scores by Group	Capacity of 19 Technical Areas
Low scores 1–2 (Low capacity)	<ul style="list-style-type: none">• Legislation, policy, and national financing• Coordination, communication, and International Health Regulations promotion

¹¹ The CERC of ongoing projects in the World Bank's Madagascar portfolio was triggered on September 3, 2020, and an additional US\$123 million was leveraged to prevent further deterioration of the crisis and help fill part of the financing gap of the country's Multisectoral Emergency Plan, with a focus on health (US\$40 million), social protection (US\$45 million), and private sector mitigation-related measures (US\$33 million). Although this activation of the IDA Immediate Response Mechanism/CERC was in response to COVID-19, the CERC of the Sustainable Landscape Management Project (P154698) was triggered to finance US\$40 million of the additional health sector response.

¹² The Government has published in February 2022 the findings of an audit by the Court of Accounts of donor financial flows during the COVID-19 crisis. The audit noted that: (i) World Bank financing - mainly through CERCs – followed World Bank procedures; and (ii) no anomaly was observed by the Court of Account with regards to World Bank financing (a finding reconfirmed by the World Bank's post procurement review of the CERCs). The government has also published three other audit reports on government operations during the COVID-19 crisis: organizational audit, performance audit of social protection measures, and audit of public procurement contracts. The government has committed to engage openly with all development partners in the process of formulating and implementing an action plan to implement the recommendations issued by the Court of Accounts.

¹³ WHO. 2017. *Joint External Evaluation of IHR Core Capacities of the Republic of Madagascar*. Geneva: WHO.



	<ul style="list-style-type: none">• Resistance to antimicrobials• Food health security• Biological safety• Preparedness• Link between public health and security authorities• Medical means and staff deployment• Entry points• Chemical risks• Radiological emergency
Mixed scores (Some indicators low, others high)	<ul style="list-style-type: none">• Zoonoses• Immunization• National laboratory system• Notification• Staff development• Emergency interventions• Communication on risks
High scores 3-4-5 (Developed capacity)	<ul style="list-style-type: none">• Real-time surveillance

11. **To have functional and sustainable capacity, Madagascar will need to strengthen all 19 JEE technical areas by implementing the recommendations; however, some key areas can be prioritized.** Essentially, the country could focus on: (i) the development and implementation of legislative frameworks conducive to (ii) multi-sectoral coordination in the implementation of IHR 2005; (iii) building capacity of the IHR Focal Point and the relationship with all key sectors in prevention, detection and response; (iv) drafting and implementation of required procedures taking into account the whole-of-threats approach; and (v) analysis and mapping of epidemic and disaster risks, using a multi-sectoral approach that will enable the updating and establishment of preparedness and response plans against zoonoses, emerging and re-emerging infectious diseases and environmental risk factors using the "One Health" approach¹⁴.

12. **None of the JEE's 19 technical areas specifically assess the functions of national public health institutes (NPHIs). Still, these play a critical role in coordinating, developing, and strengthening public health capacities, helping countries achieve IHR implementation, and improving population health.** In 2017, the African Union created the Africa Centres for Disease Control and Prevention (Africa CDC) to support public health. Africa CDC has prioritized the development of strong NPHIs in all African countries and has developed guidance for countries. A model where multiple government agencies responsible for various public health functions create a platform to improve coordination and mobilization of limited resources across various agencies would be adopted by the Government of Madagascar. In October 2018, Africa CDC—through its Eastern Africa Regional Collaborating Centre (RCC)—conducted an assessment and mentorship visit to Madagascar. The Minister of Public Health and the Secretary General reaffirmed their commitment to establishing this multisectoral coordination platform related to Africa CDC's activities in Madagascar.

¹⁴<https://www.cdc.gov/onehealth/basics/index.html#>- One Health is a collaborative, multisectoral, and transdisciplinary approach — working at the local, regional, national, and global levels — with the goal of achieving optimal health outcomes recognizing the interconnection between people, animals, plants, and their shared environment.



13. **Madagascar validated its National Action Plan for Health Security (NAPHS) 2020–24 on October 8, 2021.** The plan aims to address the identified weaknesses and ensure stronger preparations and response to epidemics. Madagascar has an end-2024 target to attain scores of 4 or 5 (developed capacity) for all the indicators of the 19 technical areas of the IHR 2005. It is essential to seize the current momentum surrounding the COVID-19 crisis to build a stronger and more resilient health system to detect and respond to the health crisis and adopt a “One Health” approach. This multi-year national health security plan would prioritize interventions and financing to accelerate capacity strengthening. Its implementation would strengthen Madagascar’s response system to health emergencies and other major public health events. Indeed, the main objective of this plan is to prevent, detect and respond to the national and international spread of diseases through public health actions that are proportionate and limited to the risks to public health. This will contribute to the reduction of morbidity and mortality associated with any potential public health emergency. The plan was developed by the Malagasy government in collaboration with development partners and other key stakeholders and aligns with WHO Strategic Preparedness and Response Guidelines.¹⁵ The plan also outlines the roles and responsibilities of each stakeholder, which will be reviewed and updated at regular intervals to reflect the evolving pandemic.

COVID-19’s Adverse Impact on Health Services Delivery and Utilization, Particularly Reproductive, Maternal, Neonatal, Child, and Adolescent Health and Nutrition (RMNCAH-N)

14. **The COVID-19 outbreak has adversely impacted the delivery and utilization of essential health services, particularly those related to RMNCAH-N.** Immediately following Madagascar’s first wave of COVID-19 (March–October 2020), the World Bank conducted a follow-up analysis of essential health services during the COVID-19 pandemic.¹⁶ Significant and persistent disruptions were observed for outpatient consultations compared with previous trends and seasonality. Outpatient consultations were substantially lower between April 2020 and February 2021 than in previous years—2.5 percent lower in April 2020, 7.3 percent in June, 18 percent in July, 24 percent in August, 15 percent in September, 11 percent in October, and 10 percent in February 2021. Compared to expected levels, disruptions were particularly intense for most indicators measuring essential health services.

15. **Almost 30 percent of all deaths in Madagascar are still attributable to preventable infectious and parasitic diseases, yet coverage rates for immunization are dropping.** With declining immunization coverage rates, outbreaks are on the rise. Complete immunization coverage for children 12–23 months old dropped drastically from 62 percent in 2008 to 33 percent in 2018. A slight increase to 38 percent was observed in 2021, according to DHS 2021. Survey data from the same period show that only 48 percent of priority drugs and 51.9 percent of vaccines were available in Malagasy facilities (Service Delivery Indicator 2016, Report No. AUS18887), as financing for immunization is a binding constraint on coverage. The drop in immunization coverage results from several factors, including a lack of off-grid refrigeration capacity (and the maintenance thereof) and qualified human resources and insufficient operational immunization outreach services.

16. **Particularly severe and persistent disruptions have affected two essential RMNCAH services—family planning and routine child vaccination.** An analysis of the data from the national health management information system (*Système d’information sanitaire*, SIS), shows that in January 2021, the utilization of family planning

¹⁵ World Health Organization. 2020. *2019 Novel Coronavirus (2019-nCoV) Strategic Preparedness and Response Plan*. <https://www.who.int/docs/default-source/coronavirus/srp-04022020.pdf>

¹⁶ Data analysis from the national health management information system (*système d’information sanitaire*; SIS) conducted by a World Bank.



services in health care settings was 14 percent lower than expected (based on past utilization trends). The disruptions deepened in subsequent months, with family planning services utilization falling short by 18 percent in February, 17 percent in March, 23 percent in April, and 29 percent in May 2021. A similar trend was observed for child immunization. In May 2021, injections of BCG, pentavalent (third dose), and polio (second dose) were 14 percent, 22 percent, and 24 percent lower, respectively, than expected. While those disruptions' impact on health outcomes is unknown, a modeling exercise supported by the Global Financing Facility for Women, Children and Adolescents (GFF) in 2020 showed that persistent disruptions to essential health services at a magnitude similar to that in Madagascar could result in an increase of as much as 18 percent in under-5 mortality. Therefore, actions to reestablish essential health services are urgently needed to prevent a high secondary impact of the pandemic on the health and well-being of women, children, and adolescents in Madagascar.

Major Weaknesses in the Health System Hindering Quality Service Delivery

17. **The main drivers of poor service delivery relate to staffing (doctors and nurses) and frontline workers, who are chronically underfinanced.** The primary healthcare system has neither the skilled human resources nor the financial resources to carry out basic functions. Madagascar's health system spends US\$19.8 per person per year, less than a quarter of the regional average (US\$80)¹⁷. Ensuring that financing reaches health centers—and that the centers have some autonomy in using these funds—is essential for quality service provision. Since 1995, total health expenditure has remained near 4–5 percent of GDP. Domestic government resources finance only about 20 percent of the health sector budget. Regular salary expenditures account for 71 percent of allocated domestic financing in 2022, significantly higher than typically observed in low-income economies. This has resulted in limited resources for operational activities at the community and primary levels as well as limited autonomy of health centers to manage available funds, negatively impacting service delivery of health services for the most vulnerable population. Community and primary levels of the health system should ensure the delivery of a basic package of preventive and curative services as the basis for a resilient and well-performing health system.

18. **Mechanisms to protect the poorest from health financial risks and assure access to basic health services are limited and fragmented.** Those mechanisms that are in place—community health insurance and vouchers (for example, vouchers for children and pregnant women exist only in some regions, and free services are provided only for specific programs)—suffer from fragmentation and do not cover all regions or all population groups. Furthermore, the Equity Fund (*Fonds d'Equité*) is not used appropriately. To achieve the objective of Universal Health Coverage, Madagascar needs a revised strategy to increase financial access to basic health services to complement the law on health financing protection that is under preparation. It would require formalizing the eligibility for free health care and financing for an equity fund to support the enrollment and free access to care for these groups.

19. **Improving health human capital outcomes requires better human resource investments to address inadequate resources, distribution, training, and management.** Health workforce planning and management are challenging due to the following issues: (i) workforce requirements and recruitment involve various actors, including the Ministry of Public Health (MoPH), the Ministry of Finance (MoF), and the Ministry of Civil Service; (ii) staff recruitment and deployment processes remain centralized and suffer from a lack of transparency and corruption; and (iii) training requires collaboration between the MoPH and Higher Education Institutions, the

¹⁷ <https://data.worldbank.org/>



Ministry of Higher Education, and the private sector. Moreover, health workers are poorly prepared: none of the clinicians interviewed during the Service Delivery Indicator (SDI) survey in 2016 correctly diagnosed five tracer conditions; only 22 percent adhered to clinical guidelines for managing maternal and newborn complications. Preservice education of health personnel in Madagascar suffers from a lack of financial resources and qualified teachers, inadequate facilities, and outdated curricula that do not conform to international standards. Due to the limited capacity of public preservice institutions, there has been a proliferation of poor quality private training institutions during the past decade. Strengthening the capacity of preservice institutions and establishing a national examination requirement for licensing would improve the number and quality of graduates and the midwifery and nursing workforce, improving access to quality services at all levels.

20. Health personnel deployment is also characterized by regional imbalances. Persistent gaps in critical staffing positions exist predominantly in rural areas, placing the rural population at a disadvantage. During the last five years, an average of 70 percent of domestic health spending was allocated to human resources. Still, in health facilities there is only 1.99 doctors available per 10,000 inhabitants, 2.98 nursing and midwifery personnel¹⁸ per 10,000 inhabitants, , far from the WHO standard (44.5 health workers per 10,000¹⁹ population). In addition to the rural area staffing gap, there is an imbalance in the skills mix, particularly for doctors; only 28 percent of doctors operate in rural areas, covering 79 percent of the population.²⁰ More broadly, many primary health care (PHC) facilities are not headed by doctors as intended by the health sector regulations, and many doctors change posts frequently. According to a small-scale survey conducted by the World Bank in 2020, 75 percent of the surveyed PHC heads were not medical doctors but nurses, midwives, or even volunteers that were not formally part of Madagascar's civil service.

21. The government has introduced measures to improve the governance of health service delivery. Still, much remains to be done to reduce the impact of governance weaknesses on the availability and quality of care. Some reforms were supported by the first phase of the Human Capital Development Policy Operation (approved by the World Bank's Executive Board in March 2020; P168697).²¹ For health financing to PHC, a November 2019 reform effectively established a new flow of funds for the health sector throughout the country through collaboration between the MoPH, the Ministry of Decentralization, the MoF, and development partners. Funds for PHC facilities (*Centres de Santé de Base*, CSB) are now managed at the *commune* level instead of the health district level, thus closer to the service delivery, and heads of CSBs have more decision-making power in allocating these resources. A review of the 2022 Finance Law shows a threefold increase in funds allocated to CSBs. Consequently, strengthening the capacity of local stakeholders to manage these funds would be important. On workforce management, the ongoing census of government personnel,²² including health personnel, will contribute to (i) creating a unified and reliable database on the composition and allocation of personnel across the country and (ii) reducing financial losses from irregularities in the payroll value chain.²³ The government is also deploying a unified human resource management information system, *Augure*, across the public administration to harmonize HR business processes, improve workforce management and allocation, and enhance transparency and control. Several modules are currently operational. Regarding the health sector

¹⁸ [https://www.who.int/data/gho/data/themes/topics/health-workforce - 2018 \(latest available data\)](https://www.who.int/data/gho/data/themes/topics/health-workforce - 2018 (latest available data))

¹⁹ <https://apps.who.int/iris/bitstream/handle/10665/250330/9789241511407-eng.pdf> (4.45 health workers per 1,000 population: minimum density representing the need for health workers)

²⁰ National Health Human Resources Development Plan - *Plan National de Développement des Ressources Humaines en Santé (PNDRHS)* -, Madagascar, 2015

²¹ IDA-65670 and IDA-D5770.

²² The census is co-financed by the PARN and PRODIGY projects.

²³ The Court of Account (2018) estimates losses around EUR 10–30 million due to irregularities in payroll management.



workforce, steps have been taken to strengthen regulation for pre-service training of qualified health workers. However, these still need to be implemented to ensure increased clinical skills of health staff. In addition, the government has piloted several initiatives to improve retention and attract qualified candidates in remote areas, but those have been so far fragmented and seen limited success. Overall, there remain few mechanisms to strengthen accountability and citizen engagement. And this contributes to an unresponsive delivery system.

22. Prioritizing interventions is key to moving Madagascar's human capital agenda forward and strengthening links with other sectors like education, social protection, and governance. As part of the GFF, since 2017 Madagascar has been strengthening coordination with its financial and technical partners and building consensus on national priorities to improve maternal, child, and adolescent health and nutrition outcomes. The GFF is a global partnership that supports enhancing the well-being of women, children, and adolescents while driving long-term, transformational changes in health systems, particularly in health financing. It aims to achieve this by strengthening dialogue among key stakeholders and identifying priorities to which all partners can commit their resources. These include (i) getting better results from existing resources and increasing the total volume of financing from four sources (domestic government resources, financing from International Development Association (IDA), aligned external financing, and private sector resources); and (ii) strengthening systems to track progress, learn, and course correct. Through the GFF process, Madagascar developed a draft Investment Case (IC) based on a thorough analysis of system bottlenecks and evidence-based interventions. The IC, developed using newly-available data from the MICS 2018 and validated and disseminated in December 2021, aims to ensure strong government leadership and ownership.

C. Relevance to Higher-Level Objectives

23. The proposed project aligns with the objectives of the World Bank Group Country Partnership Framework for Madagascar for FY17–21 (report number 114744-MG; discussed by the Board of Executive Directors in June 2017) and the Performance and Learning Review of the 2017-21 CPF (Report No. 162157, August 2021) and contributes to the government's development plan, the "Initiative Emergence Madagascar" 2019-23 (IEM), and the NAPHS 2020–24. Overall, the CPF seeks to increase the resilience of the most vulnerable people and promote inclusive growth while strengthening national and local institutions to reduce fragility and adapt to climate change. The proposed project falls within the first focus area of the CPF—to increase resilience and reduce fragility. It aims to strengthen vulnerable people's resilience and support the government's efforts to implement the NAPHS, protect basic services and populations from COVID-19, and fortify Madagascar's health system. The project also reinforces the decentralized delivery of local public services and promotes accountability through citizen engagement. The operation is complementary to other World Bank initiatives such as Universal Health Coverage (UHC) for Sustainable Development Goals (SDGs) 2030²⁴ and the CERC embedded in the Improving Nutrition Outcomes MPA program that was triggered to support the country's COVID-19 response. Overall, the proposed project aligns with the World Bank's twin goals of ending extreme poverty and boosting shared prosperity as it will support increasing the resilience of the health system and support improved access to and quality of local-level health services, then enabling progress toward the achievement of UHC, in which all people are effectively covered by essential health services, and nobody suffers undue financial hardship because of illnesses.

Adjustments to the Country Program in Response to the COVID-19 Crisis

²⁴See <https://www.worldbank.org/en/topic/universalhealthcoverage#2>.



24. **As outlined above, the pandemic has had a significant impact on Madagascar's development financing needs over the next two years, requiring adjustments to the World Bank country program.** In line with the World Bank Group COVID-19 Crisis Response Approach Paper 2020, the World Bank has realigned resources to save lives threatened by the virus. These include protecting the poor and vulnerable, securing the foundations for the private sector, and strengthening policies and institutions for increased resilience based on transparent, sustainable debt and investments. Program adjustments include: (i) reallocation of portfolio resources through activation of the CERC and restructuring and reallocations of funds in existing programs; (ii) developing new operations responding to the pandemic that were not envisioned in the original CPF program (e.g., Pandemics preparedness program); and (iii) reprioritization of the CPF pipeline to advance operations that were planned for later years (from FY22/23 to FY21).

25. **The World Bank's response aligns closely with the government's response plan and the activities of other development partners.** The World Bank has played a critical coordinating role in strengthening the donor response. These efforts have resulted in a coordinated response on budget support measures. Similar efforts were carried out to rally donors around the response on health, social protection, and the private sector, financed through a coalition of donors and leveraging the donor coordination platforms. In addition, the multisectoral emergency plan, one of the reforms supported by the World Bank Emergency Development Policy Operation (Madagascar COVID-19 Response DPO, P174388), has served as a platform for identifying priority needs and coordinating donor support.

II. PROJECT DESCRIPTION

26. **This project addresses critical country-level needs for disease surveillance and epidemic preparedness while supporting the protection of essential health services affected by the COVID-19 crisis and strengthening the health system's resilience.** This would be achieved through health system investments (information systems, laboratory networks, human resources, and so on) to improve Madagascar's ability to prevent, detect, and respond to epidemics and reduce the risk of disruptions to basic health services by ensuring access to critical inputs (reproductive health commodities such as family planning). Such investment would also strengthen the resilience and performance of basic health services by increasing the autonomy, financing, and accountability of PHC facilities, availability of health workers at the local level, and financial accessibility of the poorest to these services.

27. **A key aspect of preparedness is the resilience of the whole health system and its ability to maintain delivery of essential health services during system shocks from epidemics, natural and climatic disasters, and so on.** The objectives of the NAPHS and the GFF IC—key project reference documents—are thus aligned with the project. The NAPHS aims to contain and mitigate the health impact of emergencies on the population by reducing morbidity and mortality related to any potential health emergency through risk mitigation, early detection, and adequate response. The goal of the GFF IC is to contribute to the reduction of maternal and infant mortality, the well-being of Malagasy families through universal access to voluntary family planning services, and the provision of health insurance, including financial risk protection, to everyone to access quality essential health services and safe, effective, and affordable essential medicines and vaccines.

28. **The project will also contribute to regional pandemic preparedness efforts, particularly by strengthening its collaboration with Africa CDC.** Africa CDC plans to link regional disease surveillance and response projects into an integrated system. Full regional integration would make it possible to take full



advantage of the existing capacities of health institutions while maximizing the impact of investments by international development partners, both in and outside of the health sector. Within this framework, the project will establish a robust national public health institution model capable of implementing existing WHO frameworks for integrated disease surveillance and the 2005 IHR consistent with guidelines and standards for collaboration with Africa CDC and other regional organizations. In addition, the project will integrate the human and animal health laboratory network in Madagascar into the Africa CDC Regional Integrated Surveillance and Laboratory Network (RISLNET) to support prevention, early detection, and response to current and emerging public health threats at the regional level.

29. **Geographic targeting.** The project will be implemented at the national level for Component 1 (Strengthening Pandemic Preparedness Capacities and Response) and Subcomponent 2.1 (ensuring access to critical inputs) and target the nine priority regions identified in the GFF IC for other (Sub)components. The priority regions were selected by ranking regions on 14 indicators related to maternal and child health and poverty. The selected regions are Atsimo Andrefana, Androy, Sava, Anosy, Sofia, Ihorombe, Atsimo Atsinanana, Menabe, and Vatovavy Fito Vinany.

30. **The project will adopt a results-based financing (RBF) approach, including the use of one Performance-Based Condition (PBC)** to support efforts to adopt and implement institutional and policy reforms related to public human resources for health (HRH), requiring coordination across institutions. Only 5.6 percent of the project will be disbursed against the achievement of one PBC (representing 37.5 percent of the subcomponent supporting health workforce management), as specifically focused on the HR reform.

31. **Recognizing the global nature of health emergencies, in June 2020 the World Bank Board approved the creation of a new umbrella trust fund program, the Health Emergency Preparedness and Response (HEPR) Program.** The development objective of the Program is to support eligible countries and territories to improve their capacity to prepare for, prevent, respond to, and mitigate the impact of epidemics on their populations. It was established as a flexible mechanism to provide catalytic, upfront, and rapid financing when other sources of funding are not available for health emergency preparedness and to fill specific gaps in health emergency responses. Eligible activities focus on two pillars: (i) preparedness for future health emergencies; and (ii) responses to emerging and current health emergencies. The HEPR Multi-Donor Trust Fund (MDTF) is the anchor trust fund of the HEPR Program. Madagascar was allocated a HEPR MDTF grant of US\$2.9 million to strengthen health emergency preparedness on the condition that these resources not be used to purchase COVID-19 vaccines.

A. Project Development Objective

PDO Statement

32. To strengthen cross-sectoral capacity for pandemic preparedness and response and improve the provision of basic health services and quality of care.

PDO Level Indicators

33. **The achievement of the PDO will be measured through the following key indicators:**



- Indicators related to the IHR on coordination, surveillance, and laboratory capacity (with a target score of 3 or 4 on the JEE by the end of the project, that is, developed or demonstrated capacity in the area):
 - Progress toward establishing an active, functional national One Health platform
 - Interoperable and interconnected real-time electronic notification system
 - Laboratory Quality System
- Number of women using a modern contraceptive method
- Percentage of CSBs meeting revised national standards

B. Project Components

34. The project activities under each of the three project components (the fourth component is a zero cost CERC) are designed to support the government in implementing the activities presented in the NAPHS 2020–24, National Strategic Plan for Public Health Surveillance, and the GFF IC for reproductive, maternal, neonatal, adolescent, and child health.

Component 1: Strengthening Capacities for Pandemic Preparedness and Response (*US\$60 million equivalent, including US\$57.1 million IDA and US\$2.9 million HEPRTF*)

35. This component will help strengthen Madagascar's capacity to prepare and respond to the ongoing pandemic and other infectious disease outbreaks by strengthening multisectoral systems and adopting a One Health approach. The priority interventions are those identified in the NAPHS 2020–24 which builds on the 2017 JEE.

Subcomponent 1.1: Develop Necessary Assessments to Implement One Health Approach (US\$2.9 million HEPRTF)

36. Develop necessary assessments to implement the One Health approach to prepare and respond to the COVID-19 pandemic and infectious disease outbreaks, and support interoperable and interconnected systems through technical assistance, studies, development of related manuals, and multisectoral outreach. Technical assistance will thus be provided to:

- (i) Analyze the current organization of the ministries according to the One Health approach and their capacity to respond to epidemics/pandemics, health system resilience modeling, and provide recommendations for improvement.
- (ii) Conduct a situational analysis of the existing information systems of the different sectors according to the One Health approach and propose recommendations for improving the use of information and communication technologies from the community level to the central level. Consultancy services will be sought to analyze the level of use of ICTs in the information system of the different sectors and make recommendations for greater use. An operational manual for conducting rapid health risk and/or needs assessments for communities recently affected by emergencies will be developed and accompany the training.
- (iii) Evaluate the feasibility of interoperability of the different systems and support implementing an



interoperable and interconnected real-time electronic notification system.

- (iv) Develop procedures manuals to facilitate the timely distribution of material resources to the community in the context of emergencies, as well as mechanisms to obtain or reallocate financial resources to support emergency response and recovery.
- (v) Elaborate and validate a multi-sectoral health risk and emergency communication strategy, including rumor management, grievance, and information tracking mechanism.

Subcomponent 1.2: Improve Cross-sectoral Coordination, Collaboration, and Capacity for Preparedness and Response (US\$20.1 million equivalent IDA)

37. This subcomponent will support strengthening the One Health regulatory framework in Madagascar and operational preparedness and response capacity, especially at the local level. The project will support the establishment of the operational coordination platform, including developing a roadmap and legal and regulatory framework and setting up the related financing mechanisms for the implementation of the IHR (2005). It will also strengthen institutional mechanisms for intersectoral collaboration and strong partnerships with other countries and regional organizations such as Africa CDC.

38. Interventions that will be supported include:

- (i) **Technical assistance to support the setup of the operational coordination platform with One Health approach.** This intervention will support the drafting of the needed legal act and partnership building activities for outbreak preparedness, the improvement and harmonization of policies, legislation, and operating procedures, and the establishment of national and regional financing mechanisms to ensure the swift mobilization of resources for animal health and public health emergencies, including climate shocks (cyclones, droughts, floods, and climate-related disease outbreaks). Africa CDC will provide complementary technical assistance to support this activity. Furthermore, the subcomponent will support participation in national IHR-Performance of Veterinary Services (PVS) transition workshops,²⁵ allowing for analysis and improvement of collaboration between the two sectors in the prevention, detection, and response to zoonotic diseases and other health events at the animal-human interface (food safety, antimicrobial resistance).
- (ii) **Training and capacity building in IHR (2005) for human, animal, and environmental health personnel.** This intervention will create a single database of national experts and all stakeholders in IHR, a map of available personnel, and an advocacy document for investment in human resources for the three sectors. There will also be provisions for establishing a sustainable training program in the field and applied epidemiology, which will consist of integrating basic epidemiology and Integrated Disease Surveillance and Response (IDSR) training into the initial training program for nurses, doctors, para-veterinarians, and veterinarians who will also be service providers at the basic health service level and will provide veterinary services; developing and implementing an updated personnel strategy for a functional multi-sectoral workforce, operational research, knowledge sharing activities including simulation exercises to validate core capacities in the IHR (2005) monitoring and evaluation framework; and participating in regional and international health crisis management initiatives. In addition, climate-related diseases will be incorporated

²⁵ Organized by the WHO and the World Organization for Animal Health (OIE), with participants from public health and animal health services.



through specific modules and training materials in the field and applied epidemiology training program.

(iii) **Investments to strengthen emergency response capacity at the local level.** This intervention will develop the health aspects of emergency response for disease outbreaks, including climate-related disease outbreaks, and health aspects of other emergencies, including climate shocks, such as emergency medical services in response to flooding, cyclones, and drought. More specifically, these risk and disaster management services would provide logistical support in emergency situations.²⁶ This aspect will include strengthening emergency operations centers and response capacity (one center permanently functional at the national level, 23 centers at the regional level, and 114 centers at the district level for rehabilitation, capacity building, equipment, and functionality), establishing and managing a database of multidisciplinary rapid response teams that can deploy rapidly, developing and managing stockpile mechanisms to ensure availability of supplies during an emergency response, including response to climate shocks (storage facilities available in at least 20 remote districts at risk in the event of a health emergency, 75 health facilities provided with computer equipment for stock management, and so on), establishing outbreak treatment centers (rehabilitation), rapidly mobilizing and deploying resources in response to major infectious disease outbreaks (prepositioning of equipment, materials, reagents and supplies necessary to ensure the management of health emergencies at the regional level to support the districts, two to three months after detection of first cases), strengthen the capacity to detect and manage public health events at the nine main Ports of Entry (standardize the technical platform and infrastructure: international immunization centers, quarantine centers, contact and case treatment centers, isolation room equipment, acquisition of starter kits of vaccines and consumables, and so on), and implementation of the health risks and emergencies communication plan, including a rumor management, grievance, and information monitoring mechanism.

Subcomponent 1.3: Strengthen Human and Animal Disease Surveillance Systems (US\$18 million equivalent IDA)

39. **Strong and interconnected disease surveillance systems are essential for rapid response and close monitoring of potential outbreaks, including climate-related disease outbreaks.** Under this subcomponent, the project will support:

(i) **Technical assistance to develop harmonized procedures for surveillance, notification, diagnosis, and response to priority diseases, including climate-related diseases based on:**

- reviewing, updating, and mapping health risks and priorities diseases, including a focused review of climate-related priority diseases
- mapping available capacities, resources, and actors
- updating cross-sectoral multi-hazard plans for epidemic and pandemic preparedness and response, including for climate-related diseases

(ii) **Harmonization of electronic disease surveillance with the IDSR approach,** including the development of harmonized guidelines, protocols, and tools to improve surveillance and reporting processes as well as the development of standard methodologies and protocols for the efficient flow and use of surveillance data (applicable to public and private actors involved in disease surveillance) to be integrated into regional/international public health management information systems.

(iii) **Investments to ensure interoperability of disease surveillance and laboratory information systems that will be integrated into the District Health Information Software 2 (DHIS2) health system platform.** Support

²⁶ National Response Plan COVID-19, 2nd wave and beyond: Madagascar health sector – October 2021



will be provided for the development and strengthening of the required information and communication technology (ICT) infrastructure, to strengthen the surveillance system and the mechanism for multisectoral collaboration in detection and response. There is also a need to strengthen capacity to functionalize surveillance systems and ensure their appropriate use: Antimicrobial Resistance (AMR) (detection and notification) training and mentoring programs, available and implemented as part of One Health; prevalence survey on antimicrobial use at the hospital level; AMR data available on DHIS2 platform; developing an operational infection prevention and control system for health care facilities and agricultural facilities; ensuring appropriate use of all antimicrobials in human and animal health and in agriculture (pharmacovigilance); establishing regionally-adapted surveillance systems/networks to monitor zoonotic diseases at regional and national levels; strengthening the surveillance system and multisectoral collaboration mechanism in the detection and response to foodborne illnesses and food contamination (including the operationalization of three food analysis laboratories); and ensuring transmission of reports to WHO, World Organization for Animal Health (OIE) and World Food Programme (WFP). These strengthened and integrated disease surveillance systems will extend to climate-related diseases. They will be particularly beneficial in understanding their shifting transmission patterns, which are impacted by the country's changing climate.

(iv) **Investments to expand and improve sentinel surveillance sites for AMR and human and animal diseases, including at the community level.** Currently, eleven sites are operational, with 33 additional sites to be supported for training, provision of supplies, delivery of consumables, management tools, office supplies and sampling kits, and PPE. This will involve strengthening community-level surveillance structures and processes for detection of events in communities (human and animal). It will involve improving community-level surveillance capacity for active surveillance: timely reporting by community-level surveillance officers as well as district health and veterinary facilities; reducing the time between sample collection and laboratory confirmation and reporting; developing and implementing a plan to ensure adequate coverage for community surveillance by the central level; and technical assistance would be provided by Pasteur Institute for the expansion of the sentinel surveillance site.

(v) **Piloting innovative digital surveillance approaches to improve monitoring and control of infectious disease outbreaks.** A mobile laboratory to screen and detect pathogens onsite in real-time could be considered. Digital monitoring will also support the rapid transmission of real-time data during climate-related shocks.

Subcomponent 1.4: Strengthen the Quality of Laboratories (US\$19 million equivalent IDA)

40. The project will aim to set up and operationalize a network of high-quality laboratories for human and animal health in Madagascar, which would be integrated with the Africa CDC RISLNET (currently supported by the World Bank-financed Africa CDC Project).²⁷ The project would support the following interventions to achieve this objective:

- (i) **Technical assistance for mapping of laboratories, development, and implementation of an overall laboratory policy** to strengthen the quality of laboratory services (quality assurance, maintenance, norms and standards, supply of reagents and consumables, and so on). An assessment of existing human and animal health laboratory facilities and networks for intervention prioritization will be among the first activities.
- (ii) **Setup of an external evaluation program for laboratory quality**, including quality policies such as

²⁷ Africa CDC Regional Investment Financing Project (P167916)



standards development, quality assurance systems, procedures, and protocols, and a laboratory level quality policy based on WHO/AFRO and the Performance Veterinary Services tool.²⁸ It will strengthen existing reference laboratories and possibly identify new ones for specific diseases or diagnostic techniques; strengthen networking and information sharing; and harmonize laboratory quality assurance policies based on international standards.

(iii) **Strengthening laboratory capacity** by purchasing specialized, high-quality equipment and training staff in virology, bacteriology, and immunology. This support would improve the technical platform for 24 laboratories at the national and regional levels (17 for human health and seven for animal health). In addition, a national biosafety and biosecurity system across the three sectors (human, animal, and environmental health) will be implemented to minimize the risks of accidental or intentional infections.

(iv) **Establishing/strengthening of the Laboratory Information Management System (LIMS) or equivalent mechanism (training of staff, equipment).** The LIMS would allow laboratory data sharing between relevant One Health sectors (animal, human and environmental health sectors), especially for priority diseases with epidemic potential. The three main research centers in Madagascar will lead this One Health Lab Network—the National Center for the Application of Pharmaceutical Research (*Centre National d'Application des Recherches Pharmaceutiques*, CNARP) for human health, the Malagasy Institute of Veterinary Vaccines (*Institut Malgache des Vaccins Vétérinaires*, IMVAVET) for animal health, and the National Environmental Research Center (*Centre National de Recherches sur l'Environnement*, CNRE) for environment—to optimize strategic decisions and orientations based on research results for the various sectors. Measures to improve data management will include strengthening the capacity of laboratory personnel in the analysis and use of laboratory surveillance data; strengthening laboratory data management systems to improve the efficiency of bottom-up and top-down reporting; and ensuring the interoperability of laboratory data management systems and integration with the regional laboratory system.

Component 2: Strengthening the Resilience and Performance of Basic Health Services (US\$64.9 million equivalent, including US\$32.9 million IDA and US\$32 million GFF)

41. **This component aims to strengthen the resilience and performance of Madagascar's health system, particularly primary health care.** Ensuring the availability, accessibility, and quality of basic health services for the population is especially important during the current pandemic, both to address its adverse consequences and contribute to its resolution. The project aims to ensure that Madagascar's investments in pandemic preparedness go hand in hand with the strengthening of primary health systems. Interventions under this component will support the implementation of major reforms in the financing of health facilities and HRH management. This second component is cofinanced with GFF through two GFF grants: one from GFF Essential Health Services Grant (portion A) and the second from Madagascar GFF activities (portion B).

Subcomponent 2.1. Ensure the Availability of Essential Health Services (US\$15 million GFF portion A and US\$7 million GFF portion B)

42. **Under this subcomponent, the project will ensure the availability of essential health services and related capacity-building, rehabilitation of health centers, outreach and training, for purposes of adolescent and reproductive health, family planning and youth-friendly health services.** The project will also finance related

²⁸ https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/pdf/OIE_PVS_Pathway_Laboratory_Manual_2014.pdf



commodities, and the deployment of routine children immunization (excluding the purchase of vaccines). These services were particularly disrupted during the pandemic, especially those related to RMNCAH-N like reproductive health services (including family planning) and routine immunizations for children.

43. To reestablish essential health services, the proposed project will fill financing gaps for reproductive health commodities for the first two years of the project while advocating for increased domestic resources for health. The project will finance the procurement of essential commodities, including long-acting reversible contraception (intrauterine devices and implants). These commodities would be managed through the existing supply chain management system and delivered through the existing delivery channels, mainly health facilities. Supplies and equipment (intrauterine devices and implants insertion kits) will also be procured. In addition, the project will support capacity building for health providers so that facilities can deliver integrated reproductive health and family planning services. Additional support will be provided for improving access to reproductive health and family planning services in underserved communities through mobile and outreach strategies, and through trained community health workers.

44. The project will also support adolescent and reproductive health services by expanding youth-friendly health centers. The proposed project will support strengthening the capacity of public health centers to provide youth-friendly health services. Based on lessons learned from existing programs and the Adolescent Sexual and Reproductive Health Strategic Plan 2018-20, activities will include (i) minor rehabilitations of 200 health centers to be more attractive to adolescents, including a separate patient waiting area with a TV and a private consultation room; (ii) training health center staff to provide integrated high-quality and nonjudgmental education, treatment, and care, including family planning and gender-based violence (GBV) services; and (iii) training of local/community influencers such as young peer educators and community health workers to support demand creation and raise awareness of the availability of adolescent and reproductive health services. The selection for the 200 health centers will consider the nine regions identified by GFF as priority regions for RMNCAH-N IC.

45. To generate demand, demystify issues, and address social norms surrounding reproductive health services, including family planning, the project will support dedicated communication strategies to address these challenges. These activities will include technical assistance to the MoPH/Department of Family Health to develop communication strategies and plans. The development and implementation of these strategies would target (i) increasing knowledge and understanding of benefits and risks and (ii) information on where to access these essential products. The risk communication strategies for basic reproductive health services would be conducted using innovative technologies and use several media means and be adapted for the diverse targets (health workers, community leaders, local population). The project will implement specific information campaigns that emphasize the dangers of early pregnancy and the benefits of contraception. In a society that values the number of children as wealth, community engagement is also key in supporting demand for reproductive health services and contraceptives. The project will engage local leaders and local champions (especially men) who will be trained to mobilize their communities.

46. To address pandemic-related disruptions to routine immunizations (decrease of vaccination rates for BCG, pentavalent, and polio), the project will provide financing for a catch-up vaccination campaign during its first two years. The MoPH plans to carry out the catch-up campaign using its outreach strategy ("stratégie avancée") model, where vaccines are delivered by mobile vaccination teams in collaboration with community health workers. Gavi provides vaccines and consumables for routine vaccination. The project will complement



this support by financing the cost of vaccine deployment (for BCG, pentavalent, and polio). The project would support nine planned waves of the catch-up campaign in 2022 carried out by the staff of about 1,400 health centers in addition to facilities already supported under the PARN. The catch-up vaccination campaigns should cover a total of 1.6 million children between 12 and 59 months of age nationwide that have missed vaccination (zero doses or partially vaccinated) and will contribute to restoring immunization rates to their typical level.

Subcomponent 2.2. Strengthen Primary Health Care Financing by Increasing the Autonomy and Accountability of CSBs and Financial Protection for the Poorest (US\$22.9 million equivalent, including US\$12.9 million IDA and US\$10 million GFF portion B)

47. **Interventions under this subcomponent will contribute to primary health care financing reforms** to strengthen financing at the local level with (i) increasing autonomy and accountability of CSBs on the supply side and (ii) providing financial protection for the poorest when accessing care on the demand side in selected areas.

48. **The project will support the implementation of the allocation to CSBs reform.** Activities to be financed by the project to support the reform initiated by the Human Capital DPO (P168697) include (i) contracting civil society organizations (CSOs) to strengthen their involvement in monitoring the use of funds and supporting communities to have their needs addressed in the local health budget; (ii) supporting the development of a digital platform to help monitor, track, and publish information on the use of these funds and hold officials accountable; and (iii) supporting institutional development and capacity building activities, including public financial management and procurement for relevant stakeholders (*commune* officials, Regional and District Health Officers, and primary health care providers).

49. **In addition to supporting the implementation of the new funds flow, the project will contribute to increasing the funds available for service provision at the CSB level (CSB subgrants) in pilot districts within the nine priority regions of the GFF IC.** The project proposes to increase funds available via the commune channel to some pilot CSBs to demonstrate the potential impact of additional resources for service delivery improvement. The Project Implementation Manual (PIM, to be adopted one month after effectiveness date) will outline the selection criteria for *communes* and the additional transfer amount. The project would allocate US\$3 million to this pilot, which would also support research.

50. **Complementarily, the project aims to improve financial health protection for the poorest.** Interventions proposed under this project will contribute to implementing the under finalization Health Financing Strategy to build a sustainable mechanism for health financing protection. In Madagascar's highly-vulnerable context, where 28 percent of the poorest reported being adversely affected by drought, cyclones, and late rains in 2012, improving UHC for the poorest should improve adaptation to the impacts of climate change.

51. This subcomponent will support the following activities:

- (i) **Providing technical assistance** to further develop and implement the proposed mechanisms (such as technical/legal consultants to the MoPH to finalize the framework and operational documents and draft law as well as other texts for the creation of institutions/structures to implement the strategy) and information and training on the mechanism during the first year of the project.



- (ii) **Financing communication/information and training for stakeholders** (as well as the necessary equipment and information systems) for operationalization of the strategy.
- (iii) **Funding the mechanism to support free access to care for the poorest and most vulnerable** (pregnant women/children) in some of the nine priority regions (Universal Health Subgrants to selected beneficiaries, envelope allocated to these subgrants is US\$10 million). The technical assistance activity would inform the operational details for the financial protection mechanism during the first year of the project, and criteria for identifying beneficiaries as well as minimum benefit package will be specified in the PIM. It is expected to build on existing schemes (vouchers program supported by the PARN) and the registry of vulnerable people that is being developed under social protection (Social Safety Nets Project; P149323).²⁹

Subcomponent 2.3. Strengthen Human Resources Management (US\$20 million equivalent IDA)

52. **Interventions under this subcomponent will support strengthening human resources management and quality of service delivery to support implementation of policy reforms towards professionalization of healthcare workers and improving workforce management and retention in targeted areas (GFF priority regions).** The project will support implementation of policy reforms introduced under the Human Capital DPO, to (i) support professionalization of the health workforce and develop critical cadres to strengthen service delivery at CSB levels and (ii) improve workforce management, distribution, and retention of health workers to facilitate continuity of service provision. Having better qualified, distributed, and motivated health workers would improve service delivery quality.

53. **Providing quality healthcare is a key challenge partly due to the inadequate number of health workers and inequitable distribution of available workers.** Furthermore, there is low productivity due to high absenteeism, tardiness, high workload, and lack of training. These issues are exacerbated by late payment of salaries, lack of transparency in recruitment and allocation of staff, poor performance management, and inequitable distribution of workers. A small survey conducted by Transparency International in 2021 found that health workers suspected favoritism and corruption in the recruitment process. The anecdotal evidence on absenteeism rates also suggests low job satisfaction but also weak systems of accountability for attendance and performance. In addition, management and capacity issues in the health administration—particularly in human resources and financial management—negatively impact civil service professional development and service delivery quality.

54. **The project will support three HR areas. First, it will support improvement in human resources management (HRM)** with the design and implementation of HRM policy reforms and the gradual introduction and use of workforce planning tools (job descriptions; job and skills frameworks; employment dashboards; computerized HRM system) with narrow application to priority positions at CSB level including facility managers, nurses, midwives. The project will also support establishing a transparent and merit-based recruitment and mobility process, which will provide the MoPH with the analytical tools and methods to better map and respond to real staffing and skills needs and gaps across the country. It will also facilitate the matching of supply and demand and ensure that potential candidates have timely access and information on advertised/open positions in health facilities. Currently, the World Bank is supporting a census of all government personnel, including health



sector staff. The census will be critical to identifying personnel that are effectively in-service at the facility level. It will also help identify and exclude ghost workers, “double-dippers”, and so on. This data will support policy makers to make recruitment policies more effective and targeted to actual needs. Specifically, it will be critical that policy makers use the census to (i) design a tailored recruitment process and preservice and in-service training according to real needs and (ii) establish an annual strategic workforce planning exercise to inform recruitment needs.

55. Second, to improve health personnel motivation and retention in priority rural and remote posts,³⁰ the project will support the rollout of incentive ‘packages’ for persons assigned to and accepting postings in these areas. The packages will be based on different combinations of monetary and non-monetary job attributes. They will build on PBF activities currently implemented by the PARN project (P160848) and support improvement of working conditions (minor rehabilitations of CSB and basic equipment including purchases of solar panels to improve electricity availability). Having electricity in CSB is one essential condition of improved working conditions to attract and maintain health workers in remote areas. Interventions will include financing the motivation package for priority health centers in rural and remote areas and be implemented gradually over the course of the project (to be detailed in the PIM). To support the efficient use of resources—and reduce fraud and fund misuse—the project will support activities to improve control, oversight, and transparency.

56. The subcomponent will support the financing of specific expenditures for the motivation and retention package for health workers in priority remote and rural areas (PBC 1: Share of CSBs in priority areas that have filled medical and paramedical posts in compliance with HR norms, US\$7.5 million). Project expenditures will include government-managed transfers of remote area allowances to health workers in priority areas and transfers of funds for primary health care facilities to the *commune* level in priority areas. The PBC will incentivize improved coordination and synergies among ministries involved in HRH reforms (Health, Finance, Higher Education, Interior and Decentralization) to ensure equitable distribution of health professionals over the country. The indicator “Share of CSBs in priority areas that have filled medical and paramedical posts in compliance with HR norms” captures the impact of the incentive ‘packages’ to attract and retain health professionals in CSBs in priority areas. The funds will only be released upon verification of the professional taking up a position in the priority areas for a specific period and effectively receiving the remote-based monetary allowances. The submitted results will be independently validated by an appointed independent agency (to support the Court of Account) acceptable to the World Bank. All results (including verification of effective payments on a sample of health workers) will be accepted and cleared by the World Bank before payments are made. The PIM will detail the cost and parameters of the incentives and benefit package and criteria for identifying priority areas (for example, based on geographical location and accessibility). Each beneficiary will receive the incentives from the project for not more than three years (starting second year of the project). Beneficiaries must remain in their post to continue to receive the package. The government may commit to continue the payment for similar incentives and benefits to the individuals after the end of the project. The process and request for release of funds will be detailed in the PIM and will ensure transparency and traceability of funds.

57. Third, the project will support improvement in the quality of Madagascar’s health workforce by investing in preservice training and continuous education, by supporting design and implementation of entry-level certification and professional licensing for selected healthcare workers and providers, and development of professional curricula, including setting up of a digital platform. The proposed project will support reforming preservice education by implementing a unique national exam for nurses and midwives to obtain their degrees.

³⁰ Priority areas will be defined based on geographical and accessibility data collected through the census exercise and will include areas within the nine priority region of GFF IC.



Activities include: (i) the development of the legal framework and the organization of the national exam for the first two years while advocating for national resources for the future; (ii) support to professional Boards to develop and implement the legal framework for health provider licensing/certification; (iii) technical assistance to the MoPH and the inter-ministerial commission for the development of professional frameworks (“référentiels métiers”) and revisions to the midwifery and nursing curricula to make it consistent with occupational frameworks and evidence-based practices; (iv) rehabilitation and equipment for the six public institutions for paramedics (*Institut de Formation Interrégional des Paramédicaux*, IFIRP) for additional classrooms, IT laboratory, and a skills/simulation laboratory; and (vi) implementation support to both public and private preservice institutions for the new curricula and standards to maintain their accreditation through training and supervision. The new curricula will include specific modules on climate shock preparedness and response measures.

58. **To support health workforce certification based on continuous education, the project will support the development and implementation of a digital training platform for health personnel that incorporates innovative learning approaches.** This platform will be managed in collaboration with the *Institut National de Santé Publique et Communautaire* (INSPC) and the Faculties of medicine. As such, these institutions will receive technical assistance and equipment support, as will the regional training offices (*bureau régional de formation*, BRF), which have a mandate to coordinate training and continuing education for health providers at the regional level.

59. **The results of a survey (to be rolled out in 2022) will inform all activities in Component 2.** The survey will explore the quality of health sector stewardship and management at the central, district, and commune levels, the quality of governance of health facilities, and the experiences and perceptions of health personnel of workforce and financial management arrangements. The survey results will allow the identification and prioritization actionable transparency and accountability measures to address and counter weak processes and practices. The survey instrument will build on existing surveys carried out by the World Bank, including the Bureaucracy Lab's extensive work on survey methodologies.

Component 3: Project Management and Monitoring (US\$10 million equivalent IDA)

60. **Project management will be financed under this component,** which finances operational costs and capacity building to ensure effective coordination, management, and implementation of the first two components of the project. Specifically, it will support the costs of coordination, contracting, and management of project implementation consultants, monitoring and evaluation (M&E), independent verification, quality surveys, external audit, and project management. Workshops and seminars to advance the work under the project will be eligible for financing. There will be comprehensive training and coaching for all implementing agencies. It will also finance environmental and social (E&S) activities, including waste management. Monitoring the project's climate-related activities will also be included in this subcomponent.

Component 4: Contingent Emergency Response (US\$0)

61. This component will facilitate access to rapid financing by allowing for the reallocation of uncommitted project funds in the event of an eligible crisis or emergency, either by a formal declaration of a national emergency or upon a formal request from the government. Following a natural or man-made disaster or crisis that has caused—or is likely to cause—an imminent major adverse economic or social impact, 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, which details the simplified financial management, procurement, guarantees, and other implementation arrangements, and an Emergency Action Plan acceptable to the World Bank will be prepared and constitute a disbursement condition for this component.'

62. Table 2 below summarizes project cost and financing by source of financing and subcomponents:

Table 2. Project Cost and Financing

Project Components	Total Project Cost (US\$ million)	IDA financing (US\$ million)	GFF TF financing Portion A (US\$ million)	GFF TF financing Portion B (US\$ million)	HEPRTF financing (US\$ million)
Component 1: Strengthening Capacities for Pandemic Preparedness and Response	60.0	57.1			2.9
<i>Subcomponent 1.1: Develop necessary assessments to implement One Health approach</i>	2.9				2.9
<i>Subcomponent 1.2: Improve cross-sectoral coordination, collaboration, and capacity for preparedness and response</i>	20.10	20.1			
<i>Subcomponent 1.3: Strengthen human and animal disease surveillance systems</i>	18.0	18.0			
<i>Subcomponent 1.4: Strengthen the quality of laboratories</i>	19.0	19.0			
Component 2: Strengthening the Resilience and Performance of Basic Health Services	64.9	32.9	15.0	17.0	
<i>Subcomponent 2.1: Ensure the availability of essential health services</i>	22.0		15.0	7.0	
<i>Subcomponent 2.2: Strengthen primary health care financing by increasing the autonomy and accountability of CSBs and financial protection for the poorest</i>	22.9	12.9		10.0	
<i>Subcomponent 2.3: Strengthen human resources management</i>	20.0	20.0			
Component 3: Project Management and Monitoring	10.0	10.0			
Component 4: Contingent Emergency Response					
Total Costs	134.9	100.0	15.0	17.0	2.9

63. To accommodate existing implementation capacities and ensure multisectoral collaboration, the project will be phased in terms of technical assistance, reforms, key investments, and activities. Sequencing of the project in terms of key milestones and phasing will be detailed in the PIM.



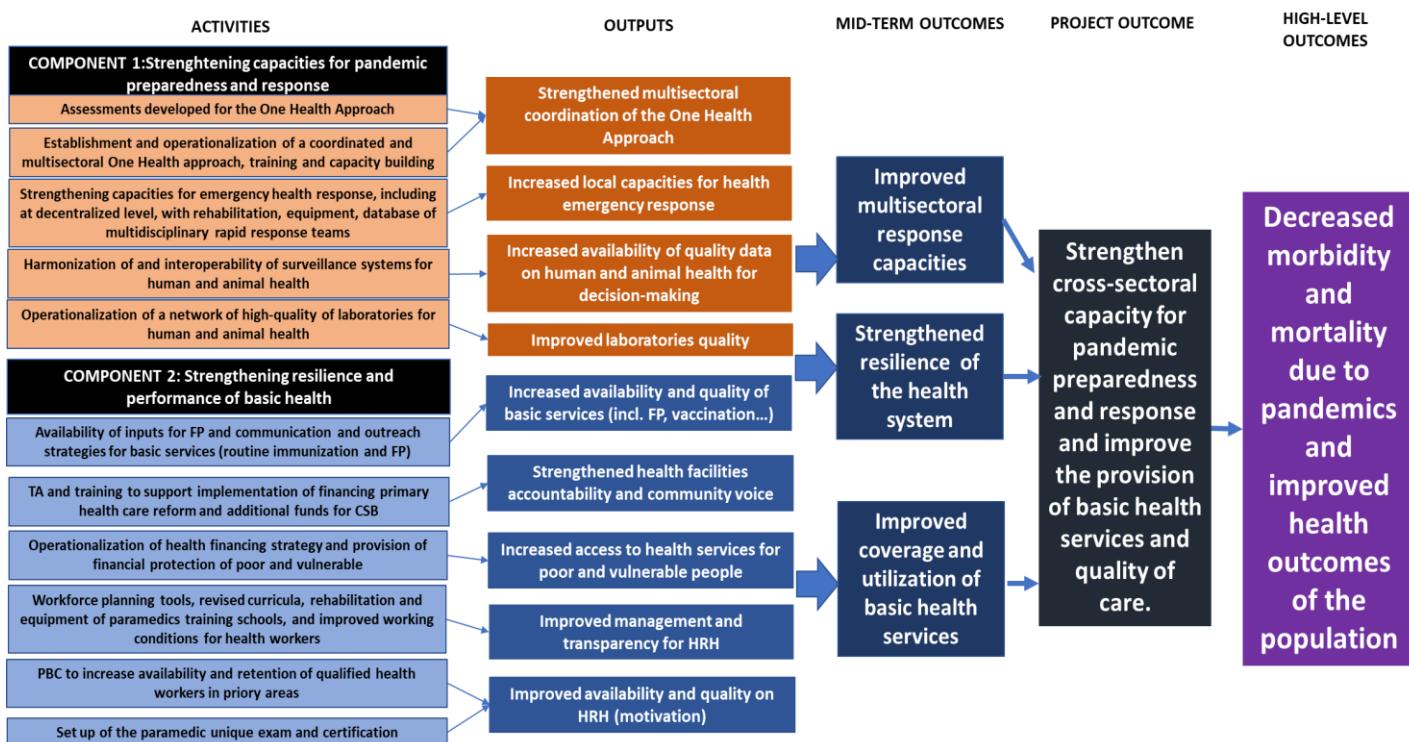
C. Project Beneficiaries

64. The project beneficiaries will be Madagascar's population of 28 million people, who will benefit from an improved pandemic response and health services provided by better trained and motivated health providers. Under Component 2, specific population groups will be the direct project beneficiaries: women and girls of reproductive age for better RH services, children under 5 for immunization outreach activities, and health workers for improved HR practices. By the end of the project, 3,560,000 children will have been vaccinated with Penta 3, and 1,900,000 people will have benefited from a financial protection mechanism. In addition, the annual number of women and adolescent using a modern contraception method will increase (from 1,913,153 to 2,161,645 for women and from 374,053 to 422,637 for adolescents).

D. Results Chain

65. The project results chain below illustrates how project investments under the two proposed components will (i) improve multisectoral response capacities, (ii) strengthen health system resilience, and (iii) improve basic health services coverage and utilization. This would contribute to the higher-level objective of reducing morbidity and mortality from epidemics and supporting better health outcomes of the population.

Figure 2. Results Chain of Pandemic Preparedness and Basic Health Services Delivery Project





E. Rationale for Bank Involvement and Role of Partners

66. **The World Bank is uniquely positioned to support the government in implementing its health security agenda and reforms for human resources and health financing** due to its existing engagement and dialogue in the health sector and its catalytic role to convene sectors. The World Bank can also use its convening power to ensure greater harmonization among development partners. Furthermore, the proposed project will ensure synergies with other projects supported by the World Bank in Madagascar and complement other partners' contributions (Table 3).

Table 3. Roles of and Complementarities with Development Partners

Partners	Roles and Complementarities
WHO	WHO supported the development of the NAPHS 2020–24 and will continue to provide technical assistance to support its implementation, specifically the JEE, assessment, and mapping of health risks. It will also advise on the implementation of the multisectoral coordination platform. WHO is also supporting the MoPH on the UHC agenda.
UNICEF	UNICEF supports logistics and communication for routine EPI, including quality cold chain equipment, quantification, and microplanning exercises. UNICEF is planning an evaluation of youth-friendly health centers that will inform the revision of the adolescent reproductive health strategic plan. UNICEF is also providing technical assistance to the MoPH with the revision of the HRH strategic plan and on UHC.
Gavi	Gavi supports routine EPI through technical assistance and by providing essential vaccines.
CDC Africa	Partnership with Africa CDC will be key for implementing interventions under Component 1, setting up the multisectoral coordination platform, and technical assistance to ensure national and regional laboratories are part of the RISLNET deployed with the Africa CDC project.
USAID	USAID is financing several health projects. Through Health Policy Plus, USAID has supported the development of the RMNCAH-N IC and the Health Financing Strategic Plan. USAID is a major contributor for contraceptives products (estimated at US\$5 million per year in 2022–23) and supports logistics and quantification exercises for family planning products, provider training, and communication interventions through bilateral projects.
European Union (EU)	The EU collaborated with the World bank to initiate the "dotation CSB" reform; the EU is continuing support for reform implementation.
Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ)	GIZ mainly focuses on decentralization and support to <i>communes</i> (reinforcing the allocation to CSB reform).
Institut Pasteur Madagascar (IPM)	IPM supports and collaborates with selected health facilities that act as sentinel sites across the country for surveillance and research purposes. It will provide technical support in scaling up the network of sentinel sites for diseases surveillance in general.

67. The project will also build on complementarities with other World Bank-financed projects in Madagascar (Table 4).

**Table 4. Complementarities with Other World Bank-financed Projects**

Projects	Objective	Complementarities
Improving Nutrition Outcomes Using MPA (P160848)	To increase utilization of an evidence-based package of RMNCAH-N interventions and improve key nutrition behaviors known to reduce stunting in targeted regions and to provide immediate and effective response to an eligible crisis or emergency	Strengthening of community health workers and health information system Co-finance with PRODIGY (P169413) the census of all government personnel including health workers
Support to COVID-19 Vaccine Purchase and Health System Strengthening (P176841)	To support the Government of Madagascar to acquire and deploy COVID-19 vaccines, and to strengthen its immunization services	Strengthen logistics, surveillance system and country coordination capacity for emergency response
Digital Governance and Identification Management System Project - PRODIGY (P169413)	To strengthen the Identity Management ("ID-M") system and government capacity to deliver services in key sectors.	Support regulatory and institutional reforms on data protection, data privacy, and cybersecurity, including the creation of the data protection authority Support an operating infrastructure as well as legal, regulatory, and institutional reforms for the interoperability of datasets and systems across the government Co-finance with Improving Nutrition Outcomes Using MPA project (P160848) the census of all government personnel including health workers
Human Capital DPO (P168697)	The objective is to support investments in human capital by improving human resources in the education and health sectors, and the availability and execution of financial resources for the social sectors	Support regulatory and institutional reforms on unique exam for paramedics, motivation linked to deployment of human resources and increased and more equitable financing for CSB
Africa CDC regional investment project (P 167916)	The Objective is to support Africa CDC to strengthen continental and regional infectious disease detection and response systems	Provide technical assistance in the implementation of the One Health coordination platform and in strengthening laboratories capacity

F. Lessons Learned and Reflected in the Project Design



68. **The project draws on good practices and innovative approaches from Madagascar and lessons from countries with successful pandemic preparedness programs and health system performance challenges.** On pandemic preparedness, strong multisectoral coordination adopting a One Health approach associated with strengthened local capacity has demonstrated better and faster responses to epidemics. For health system resilience and performance, increasing funding for primary health care has contributed to augmenting health sector outputs and outcomes. The project will also capitalize on lessons learned related to health workforce motivation and retention to develop incentive schemes for providers, for example through financial incentives or improved working conditions. Addressing distortions and discrepancies in HR staffing in service delivery requires professional support in addition to financial incentives targeted at specific talents and skills.³¹ The activities are a natural continuation of policy and regulatory reforms adopted under the Human Capital DPO. To implement the One Health approach and strengthen national capacities for preparedness and response (Component 1), lessons learnt from the Regional Disease Surveillance Systems Enhancement (REDISSE-P154807) were integrated in the project design such as the importance of cross-sectoral planning and response and reporting to international agencies for better knowledge sharing, faster response time, and decreased cost. For design of component 2, evidence shows that Increasing funding for primary health care has contributed to augmenting health sector outputs and outcomes in several other contexts.³² World Bank work highlights how citizen engagement and transparency can shape incentives and behavioral norms in the public sector, with deep consequences for the quality of services delivered.³³

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

69. **The MoPH will be the primary implementing agency for this project.** The existing Project Coordination Unit (PCU; *Unité de Coordination de Projets*) in the MoPH will be tasked with day-to-day project implementation. The PCU already supports the management of the PARN and its CERC, COVID-19 response in the health sector, the COVID-19 Vaccination Project, and financing from other partners (Gavi and Global Fund). The PCU will be expanded to cover fiduciary and E&S management for the project and coordination with key MoPH departments and other Ministries involved in project implementation. The PCU's capacity will be enhanced through: (i) a dedicated focal point for the proposed project (to be recruited within the PCU no later than three months after effective date); (ii) additional fiduciary staff, including a Procurement Officer, a Financial Management Specialist, and an Accountant; (iii) a M&E Specialist; and (iv) other technical specialists as required at the central and regional or district levels (including potentially for public health and animal health, E&S at decentralized level, planning, logistics and communications, the regulatory authority). Focal points for E&S standards would also be designated within Regional Health Directorates to monitor the E&S aspects of the project. The PCU will prepare the Annual Work Plan and Budget (AWPB), which will be cleared by the project's Steering Committee.

³¹ Lehmann, U., Dieleman, M. & Martineau, T. 2008; World Bank 2011; World Bank 2018

³² World Bank. 2014. Impact Evaluation of Zambia's Health Results-Based Financing Pilot Project; World Bank. 2018. Impact Evaluation of Nigeria State Health Investment Project.

³³ World Bank. 2016. Making Politics Work for Development: Harnessing Transparency and Citizen Engagement. Washington, DC: World Bank.



70. **Multisectoral Steering Committee.** A multisectoral Steering Committee, which will provide oversight of project implementation, will include representatives from the government ministries that are part of the One Health approach in Madagascar and stakeholders relevant to the project and entrusted, including from MoPH, Ministry of Agriculture and Livestocks, Ministry of Higher Education and Scientific Research, Ministry of Environment, among other things, with strategic and policy guidance and AWPB approval. The steering committee will be created by an interministerial decree (*arrêté interministériel*).

71. **Technical implementation of project activities.** Project implementation will fall under the responsibility of the MoPH. Other ministries will be involved to implement specific activities under Component 1 (Ministry of Environment and Ministry of Livestock). The involvement of MoF, Ministry of Higher Education, Ministry of Interior and Decentralization, Ministry of Civil Service will be key for Component 2's successful implementation. Annex 1 details implementation arrangements by subcomponent.

72. **To ensure cross-sectoral collaboration for project implementation, focal points from each ministry will be designated** (same as those for the elaboration of the national health security plan), and they will participate in regular meetings with the PCU. The project will also support collaborative coaching (Component 3). Also, an analysis of the institutional capacity of the ministries involved will be conducted and adequate support will be provided to address identified gaps.

73. **At the regional and district levels, decentralized entities from each ministry involved will play a role in implementing and monitoring project activities, according to their attributions.** Regional and District Health Officers are in charge of implementing the national health policies in their geographical areas and supervising the activities of PHC facilities.

74. **At the local level, PHC workers and community health and nutrition workers will also play a key role in implementing project activities** (for example, communicating with communities on basic health services, such as vaccine and family planning, and health service provision). They will also benefit from interventions financed under Component 3. *Communes* will also be part of the project as health subaccounts fall under the *communes'* budget. Finally, CSOs would be contracted under Subcomponent 3.1 to support the implementation of CSB financing reform, provide technical assistance to *communes* and primary health care facilities, and ensure transparency and accountability in managing these funds.

75. **To support project implementation, partnerships will be strengthened with UN agencies and other regional institutions** (such as Africa CDC). Contracts are expected with WHO to support capacity strengthening under Component 1 and conducting JEE.

76. **The project will be implemented in accordance with the PIM.** The PIM will include a detailed description of (i) institutional coordination and day-to-day execution of the project, including key milestones in project implementation; (ii) monitoring, evaluation, reporting, and communication; (iii) administration, financial management, procurement and accounting, including the Anti-Corruption Guidelines; (iv) eligibility criteria, modalities, terms and conditions, and procedures for preparation, targeting, approval, payment, verification, monitoring, evaluation, reporting, and auditing of Subgrants; (v) modalities, procedures, amounts, and verification mechanisms for payment of Incentive Packages and PBCs; (vi) environmental and social aspects; (vii) personal data collection, in accordance with applicable national law and best international practices; and (viii) such other administrative, technical, and organizational arrangements.



B. Results Monitoring and Evaluation Arrangements

77. **M&E of the project will require annual evaluations by the MoPH.** Component 1 of the project is essentially related to strengthening Madagascar's IHR capacities. The evaluation of these capacities is done under the JEE, using the WHO JEE tool. The evaluation should be done every year using the same tool. That will allow the annual monitoring of the indicators in the results framework. An actual JEE will be implemented at the end of the project to get the end-line values.

78. **The monitoring and evaluation of the project will combine the use of routine data and surveys.** The MoH is using DHIS-2, of which the development is supported by the World bank and other development partners. It is the platform used for hosting routine data and enables the monitoring of key activities at the facility level, such as consultations, vaccination, family planning, etc. By the end of the first year of the proposed project, DHIS2 should be able to track supplies, facilitating the monitoring of project indicators and the availability and readiness of services. The project will also use the MoH's current surveillance system for disease surveillance. The routine data will be complemented by surveys, both at the household and facility levels. The combined use of routine data and surveys will best capture the increased utilization of health services.

79. **Collaboration with other entities will be required for some activities.** The MoF's data monitoring system track the achievement of PFM-related activities such as the transfer of remoteness premium and disbursement rates. The Court of Account will be the verification entity that will check the achievement of the PBC.

80. **Citizen Engagement.** The project will reinforce citizen engagement and transparency and ensure that mechanisms in place are inclusive and ensure that citizen engagement closes the "accountability loop" by including mechanisms to maximize both supply (government) and demand (citizens, CSO) side pressures. The former will be achieved through better monitoring of service quality and the latter through information disclosure and citizen engagement. The project will employ the following tools and mechanisms:

- Promoting the production and disclosure of information for both inputs (e.g., budgets) and outputs (e.g., performance indicators) in the health sector using multiple information channels (e.g., local radio, newspapers, and mobile phone message campaigns).
- Using a citizen engagement indicator (percentage of communes of which the CSO assessments are available and shared) to track local CSO monitoring of health budgets and service performance at the local level. This will ensure citizen feedback leads to improvements in service delivery. The indicator will monitor, through selected indicators, the usage and quality of delivery and gather citizen feedback to gauge quality through periodic user surveys (e.g., citizen report card). These results will be published and communicated to facilitate public debate and initiate improvement initiatives.
- Strengthening the existing grievance mechanism (GM) for a more effective system for citizens at the local level. The MoPH set up a GM part of the PARN Project (P160848) in eight regions, which was later extended to all regions of the country (with health COVID-19 emergency response with CERC and COVID-19 Vaccination Project-P176841For this project, the PCU and local services will strengthen information campaigns on the GM at beneficiary municipalities' level. Available means and channels of information and communication will be mobilized (posters, written media, audio-visual, internet, social networks, public meetings, etc.).



C. Sustainability

81. **There is strong political commitment in Madagascar to strengthening the country's capacity to respond to shocks like the COVID-19 pandemic.** The proposed project will establish an enabling environment and a coordination platform for other donors, multilateral development banks, and UN agencies to support efforts in the country. And short-term investments in family planning and immunization will help reduce the negative impact of the COVID-19 crisis on health outcomes and contribute to the continuity of service provision.

82. **Project investments—together with the COVID-19 vaccine project—are expected to strengthen Madagascar's health system, ensuring institutional sustainability to deal with disease outbreaks.** Strengthening PHC autonomy and resilience will improve readiness to respond to health emergencies and maintain essential health services during a crisis. And investments in HRH will contribute to the increased quality and quantity of Madagascar's health workforce, deployment and retention of the health workforce, and overall quality of service delivery for better health outcomes over time. The successful implementation of the project will also result in the strengthened capacity of the implementing agencies, which will reinforce the sustainability of project-supported activities. It will then support financial sustainability of project investments in the medium-term.

83. **The sustainability of project investments may be jeopardized at the end of the project by changes in the political will regarding the One Health strategy's implementation.** It could also be undermined by potential limitations on financing pursuing the necessary investments (for example, training and financing the needed personnel and sustaining the early warning system, or for key HR or UHC reforms). Madagascar's integration into a regional One Health approach would help mitigate these risks and increase sustainability. Additionally, domestic resources are expected to be mobilized as part of the finance law to support national reforms also supported by the project (for example, through the PBC for HRH).

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

84. **There is a strong economic case for investing in pandemic preparedness and response.** Preventing and controlling disease outbreaks (including zoonotic) yields large economic benefits by reducing the threats of epidemics and pandemics beyond the health benefits of reducing the number of infections, reducing mortality, morbidity, and health care costs. Disease outbreaks affect economic activity by decreasing demand (as personal income, investment, and exports fall) and supply (as agriculture production falls and businesses in many sectors close), and reduces labor, capital, and productivity, which are the major components of growth.³⁴ Globally, the economic impacts of severe pandemics have been estimated at 4.8 percent of global GDP or approximately US\$3 trillion in the 21st century (Jonas 2013).³⁵ The Malagasy economy, characterized by a large share of sectors

³⁴ UNDP. 2014. Assessing the Socio-Economic Impacts of Ebola Virus Disease in Guinea, Liberia, and Sierra Leone: The Road to Recovery "...The macro-economic model investigates how the epidemic affects labour, capital, and productivity, which are the major components of growth." New York: UNDP.

³⁵ World Bank. 2013. Background Paper on Pandemic Risk for the World Development Report. "A single severe flu pandemic could cost



sensitive to outbreaks such as tourism, and zoonosis such as livestock farming, will greatly benefit from a better preparedness and response to pandemics brought by the project.

85. This project's aggregate development impact will primarily stem from strengthening Madagascar's capacity to prevent and respond to future epidemics, and from increasing access to and quality of primary health care services. Each of these factors is expected to have an economic impact through several channels.

86. The primary direct impact of epidemics is their interference with the basic economic processes of production and trade and the devastation of human capital. Even relatively small disease outbreaks, such as the Ebola Virus Disease (EVD10) outbreaks (2014/15) in Guinea, Sierra Leone, or Liberia—where less than 0.3 percent of the population was infected—caused tremendous losses, estimated at more than 10 percent of GDP.³⁶ Secondary effects, such as additional losses of human capital occur through the outbreaks' interference with basic public service functions (e.g., health and education system functions). For example, during the 2014/15 EVD10 outbreaks, students lost more than 30 weeks of schooling and routine immunizations decreased by 30 percent.³⁷ Complete evidence for COVID-19 is still outstanding with the pandemic still ongoing. However, preliminary analysis of routine health information data in Madagascar suggests that the pandemic has already had negative impacts on the continuity of health services whose implied costs in terms of morbidity and mortality are non-negligible.³⁸ Containing outbreaks before they turn into pandemics has tremendous positive externalities at the global level.

87. Improving the access to and quality of primary health care services—for example, through ensuring the provision of vaccines and basic reproductive health products—leads to reductions in morbidity, mortality, and improvements in financial protection. Essential and affordable care that is widely accessible is a fundamental component in building and maintaining human capital, which contributes to a population's productivity, and manifests in economic growth. In terms of direct costs and benefits of PHC services, there is evidence that increased investment in primary care can reduce use of secondary care and reduce overall health costs,³⁹ e.g., through fewer resources for hospitalizations, prescriptions, and common tests and procedures.⁴⁰ Evidence also suggests that primary care can improve population health in terms of life expectancy and maternal, infant, and neonatal mortality.⁴¹ Finally, there is evidence of large economic benefit from the combination of strengthening

US\$3 trillion. It is hard to imagine a more severe threat to ending absolute poverty or to boosting shared prosperity in developing countries".

³⁶ World Bank. 2015. Summary on the Ebola Recovery Plan: Sierra Leone; Summary on the Ebola Recovery Plan: Guinea; and Summary on the Ebola Recovery Plan: Liberia – Economic Stabilization and Recovery Plan. Washington, DC: World Bank.

³⁷ United Nations Development Group– Western and Central Africa. 2015. Socio-Economic Impact of Ebola Virus Disease in West African Countries: A call for national and regional containment, recovery, and prevention.

³⁸ World Bank. 2020. Monitoring disruptions to essential health services in times of COVID. Preliminary Results of the Madagascar DHIS2 data. Washington, DC: World Bank.

³⁹ E.g. Friedberg MW, Hussey PS, Schneider EC. 2010. "Primary Care: A Critical Review of the Evidence on Quality and Costs of Health Care." *Health Aff (Millwood)* (29): 766–72.

⁴⁰ Harrold LR, Field TS, Gurwitz JH. 1999. "Knowledge, patterns of care, and outcomes of care for generalists and specialists." *J Gen Intern Med.* (14): 499–511.

⁴¹ Perry HB, Rassekh BM, Gupta S, Freeman PA. 2017. "Comprehensive review of the evidence regarding the effectiveness of community-based primary health care in improving maternal, neonatal and child health: 7. shared characteristics of projects with evidence of long-term mortality impact." *J Glob Health*.



pandemic preparedness and primary health care services. For example, the return on investment from childhood immunizations in lower-middle-income countries (LMICs) has been estimated as US\$44 for each US\$1 spent.⁴²

88. Actions on HRH and financing at PHC level will improve service delivery and enable the population to access better health services. Moving CSB budget from districts to commune accounts will enable the CSBs have a direct access to their budgets. This will improve their budget execution as the decisions on CSB activity planning and funding are made at the commune level, if previously at the higher levels. As the head of CSB are involved in decisions on CSB funding and activity planning, the funds allocated to CSBs will be better used, enabling a better efficiency and execution rates of expenses. This will be exacerbated by the CSOs partaking in the monitoring of CSB budget. A better execution and a more efficiency of expenditures will eventually lead to an increase of budgets allocated to CSBs, enabling the population to access even better health care, which will avert deaths, diseases, and disabilities. As HRH will be strengthened through the project interventions at the PHC facilities level, service delivery will be improved, enabling the population access better care, which will result in a decrease of mortality and morbidity. As Madagascar is hit by outbreaks practically every year (cholera, measles, plague, COVID-19, etc.), the project is expected to decrease the number of deaths and sick people, as well as decrease disruptions in health and education service use, which will positively impact human capital.

B. Fiduciary

(i) Financial Management

89. Overall, the financial management (FM) arrangements that are to be applied in administering the project are assessed as adequate and likely to meet the World Bank's minimum requirements under World Bank Policy and Directive; FM residual risk is assessed as Substantial. The FM assessment of the current PCU under the MoPH, the project implementing agency, was carried out in January 2022, and the FM performance is rated as Moderately Satisfactory. The substantial risk is mainly attributed to (i) the weak fiduciary environment of the country and fiduciary risk, including fraud and corruption, (ii) several agencies, including some at the regional level, that will be involved in the implementation or be supporting agencies of the project, and (iii) the concept of PBC being new to the health sector, with the risk that results expected might not be fully achieved.

90. To further improve the project FM arrangements and reduce the residual FM risk, the following risk mitigating measures were identified:

- (i) One Financial Management Specialist and one Accountant will be recruited. The recruited staff will have the overall responsibility for the FM arrangements and for maintaining an adequate FM system during implementation.
- (ii) Given the risks related to PBF and PBC activities as well as the level of decentralization, the mandate of the private firm recruited under the Support to COVID-19 Vaccine Purchase and Health System Strengthening Project (P176841) for the internal audit role will be extended to cover this project. The firm will be assisted by the existing internal audit team of the PCU. In addition, an independent verification agent will be recruited to support the Court of Account (CA) for the verification of PBC expenditures.

⁴² Ozawa S, Clark S, Portnoy A, Grewal S, Brenzel L, Walker DG. 2016. "Return on investment from childhood immunization in low- and middle-income countries, 2011–20." *Health Aff (Millwood)* (35): 199–207.



- (iii) A PIM will be developed for the proposed project. The PIM of the PARN (P160848) and the Vaccination Project (P176841) will be used as the reference for developing the PIM. The PIM shall consider controls over specific activities, namely PBC, PBF, grants, and activities at a decentralized level.
- (iv) A segregated Designated Account, denominated in United States Dollars, will be opened at the Central Bank of Madagascar (*Banky Foiben'i Madagascar*) and utilized to withdraw funds from the World Bank. The funds flow arrangements will be further detailed in the PIM.

91. The FM assessment to evaluate whether the project implementing agency/PCU responsible of FM aspects meets the minimum FM requirements as per World Bank Policy and Directive was carried out in January 2022 in accordance with the Directives and Policy for IPF, the World Bank Guidance on FM in World Bank IPF Operations issued on February 28, 2017. The objective was to confirm whether the FM arrangements in place are acceptable considering management of this operation. The assessment considered the degree to which: (i) reasonable records are maintained and financial reports produced and disseminated for decision-making, management, and reporting; (ii) funds are available to finance the project; (iii) there are reasonable controls over project funds; and (iv) adequate audit, internal controls and risk management arrangements are in place to address the financial management risk of the project.

92. For activities financed by the HEPR and GFF TFs, separate disbursement categories will be created to ensure specific tracking and monitoring for each TF.

93. **The transactions will be recorded and reported upon using the existing software.** The PCU will prepare consolidated interim unaudited financial reports (IFRs), and the annual financial statement of the project will be audited annually.

(ii) Procurement

94. **The procurement assessment found that the health PCU has demonstrated capacity and experience in managing World Bank funds.** The PCU has experience with the New Procurement Framework. In addition, the PCU is managing procurement procedures for the CERC funds, with high disbursement and commitment ratios within a three-month period. Nevertheless, the procurement risk is maintained at Substantial, due to the fiduciary environment of the country which is weak and fiduciary risk including fraud and corruption. The World Bank will monitor closely the procurement activities within the PCU to ensure that procedures are followed and problems are resolved on time. The PCU will recruit a dedicated procurement officer for this purpose.

95. Procurement under the proposed operation will be guided by (i) the World Bank's New Procurement Framework, the procedures specified in the World Bank Procurement Regulations for IPF Borrowers dated July 1, 2016 (Procurement Regulations) updated in November 2017, August 2018, and November 2020; (ii) the World Bank's Anti-Corruption Guidelines: 'Guidelines on Preventing and Combatting Fraud and Corruption' revised July 1, 2016; and (iii) provisions stipulated in the Financing Agreement and the PIM.

96. All goods and non-consulting services will be procured in accordance with the requirements set forth or referred to in Section VI, Approved Selection Methods: Goods, Works and Non-Consulting Services of the Procurement Regulations mentioned above, and the consulting services will be procured in accordance with the requirements set forth or referred to in Section VII, Approved Selection Methods: Consulting Services of the Procurement Regulations, as well as according to the Project Procurement Strategy for Development (PPSD) and



the Procurement Plan approved by the World Bank. Nevertheless, for specific activities identified as emergency according to the World Bank Guidance definition, the World Bank Guidance on Procurement in Situations of Urgent Need of Assistance or Capacity Constraints, dated March 2019, will apply.

97. **The PCU and the MoPH prepared a PPSD that was reviewed by the World Bank.** In addition, and on the basis of the PPSD, the PCU prepared a Procurement Plan for the first 18 months of project implementation that was approved by the World Bank. World Bank procurement rules and procedures will be applied. The Procurement Plan specifies for each contract (i) a brief description of the activities/contracts; (ii) the selection methods to be applied; (iii) the estimated cost; (iv) time schedules; (v) the World Bank's review requirements; and (vi) any other relevant procurement information. Any updates of the Procurement Plan and the PPSD shall be submitted for the World Bank's review and approval. Continuous monitoring and mitigation of any potential risk will be made possible through regular reporting on the progress and implementation of fiduciary activities, regular supervision, and further capacity building, as necessary.

98. During project implementation, the World Bank will provide additional support and/or training on procurement procedure and Systematic Tracking of Exchanges in Procurement (STEP) clinics for project implementation as needed.

99. All procurement activities under the proposed financing will utilize the World Bank's online procurement planning and tracking tool, STEP, to prepare, clear, and update the Procurement Plan and to carry out all procurement transactions.

100. **Madagascar's national procurement procedures are widely used for local World Bank-financed projects.** The Financing Agreement will include the obligation of suppliers to respect the World Bank's Anti-Corruption Guidelines (part 4 - III of the National Code) and the right for World Bank audits.

C. Legal Operational Policies

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

D. Environmental and Social

101. The following five Environmental and Social Standards (ESSs) are relevant to the project: ESS1 Assessment and Management of Environmental and Social risk and impact; ESS2 Labor and Working Conditions; ESS3 Resource cv 5Efficiency and Pollution Prevention and Management; ESS4 Community Health and Safety; and ESS10 Stakeholder Engagement and Information Disclosure. In line with the World Bank Environmental and Social Framework (ESF) guidelines, this project's environmental and social risk rating is classified as Substantial. Project activities are expected to have long-term, positive impacts as the project aims to improve disease surveillance, monitoring, and containment in the country as well as health systems preparedness for future outbreaks. However, the project's main environmental and social risks include: (i) Occupational Health and Safety (OHS) issues for workers in healthcare facilities and laboratories that may be exposed to infectious disease contagion (the future infection spread risk is strongly associated with the management of medical waste generated in



laboratories and other facilities (if not handled and treated adequately, medical waste can become a vector in spreading COVID-19 or other infections); (ii) community health and safety-related risks (all project activities, ranging from operation of laboratories to community engagement interactions present a transmission risk in the community; operating laboratories and health centers has a high potential of infecting the wider population if not systematically managed and well-controlled); (iii) potential risks surrounding the exclusion of vulnerable groups to access project-supported services and facilities (real or perceived inequities also have the potential to lead to conflicts and citizen unrest); (iv) misunderstanding and social tensions resulting from the promotion of reproductive health services; and; (v) Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) risks.

102. **To assess and manage these risks and impacts consistent with the ESF, the project is preparing an Environmental and Social Management Framework (ESMF) that outlines the procedure for screening, classifying, assessing, monitoring, and reporting each project activity, commensurate to the risk.** The ESMF describes practices for handling, storing, treating, and disposing of hazardous and non-hazardous waste, and the types of worker training required, including staff awareness training on the hazards they might encounter. The ESMF also evaluates and addresses risks associated with cold chain in managing hazardous/medical materials or agents as needed. A SEA/SH prevention and action plan (provided in the ESMF) includes a final assessment of related risks, mitigation measures, mapping of available resources, and description of the SEA/SH Grievance Mechanism (GM). All project activities shall be subjected to environmental and social screening and where necessary, specific instruments shall be prepared before the commencement of applicable project activities. Specific mitigation measures will be outlined in the site-specific Environmental and Social Management Plans (ESMPs) and implemented, when necessary. This will provide for the application of good practices in COVID-19 diagnostic testing and handling of medical supplies and disposal of generated waste. Safe work protocols shall be developed and implemented for hazardous tasks. Health screening and COVID-19 prevention measures for workers should be incorporated into the OHS procedures outlined in the ESMPs. Emergency response and handling procedures shall be developed to handle any accidents onsite. The management of medical and biomedical waste is addressed in the existing National Medical Waste Management Plan (NMWMP). The NMWMP that was prepared and disclosed for the PARN Project (P160848) in April 2020 was updated and disclosed again in September 2021 to include particular measures related to COVID-19 vaccines such as risks related to the transport, storage, handling, and disposal of vaccines. The ESMF should reflect and address the cumulative impact of waste generation from several locations that could lead to additional stress on existing waste management facilities. To manage equitable access issues, the ESMF will identify targeted groups for UHC as per the Universal Health Coverage Strategy developed in 2015, the main barriers they might face and mitigation measures. Measures are also being taken to support citizen engagement, including the existing GM. Community sensitization and capacity building activities will be carried out in order to engage the project's key stakeholders in E&S risks management and to ensure project ownership. A Stakeholder Engagement Plan (SEP), including the project's GM, has been developed and disclosed on February 18, 2022 on World Bank website. Several consultations happened during project preparation (March 2021) with : (i) institutional stakeholders (from MoPH, livestocks and veterinary services from Ministry of Agriculture) and (ii) targeted communities in different regions of Madagascar. It will promote the participation of vulnerable groups and consider sensitivities of GBV/SEA issues. TORs for all TA are required to address pertinent E&S aspects to ensure that TA products are consistent with the ESF, including their approach to downstream impacts (for example, lab regulations, insurance eligibility criteria).

103. The government developed (i) an Environmental and Social Commitment Plan (ESCP), (ii) a SEP, including GM, and (iii) a Labor Management Procedures (LMP), disclosed on February 18, 2022 on World Bank website and on March 7, 2022 on MoPH website. The ESMF was prepared and will be disclosed as an effectiveness condition.



The E&S team of the World Bank-financed health project's PCU will be in charge of E&S management of the project. The Health and Environment Department of MoPH will support the team in implementing the medical waste plan, the Directorate of Health Promotion will help promote the GM, the Department for the Protection of Vulnerable Persons will assist on GBV activities, and the MPH shall appoint regional E&S focal points from its staff for operational support. Moreover, contracts clarifying the roles of the various agencies involved (WHO, UNICEF, and so on) should be considered. Agencies involved to support project activities will follow the project's ESMF and comply with all relevant ESSs.

Gender Dimensions and Targeting Vulnerable Groups

104. In emergencies and pandemics, gender inequalities and norms influence access to critical health services, as well as risk of exposure to disease. Factors that constrain access to and use of health services by women in Madagascar include limited mobility and financial capacity, competing demands of paid and unpaid work, and limited access to information. Women also face a high risk of experiencing GBV. They have also been impacted by discontinuity of essential RMNCAH-N services, including for maternal and sexual and reproductive health and GBV. These gender dimensions intersect with other inequalities, particularly for populations that are poor, with limited access to formal education, living in hard-to-reach areas, temporary or informal settlements, or living with disabilities.

105. Access to reproductive health services and family planning for women and girls remains problematic, in a society with strong social norms that consider the number of children born as wealth. Adolescent girls are particularly disadvantaged due to lack of information and insufficient services adapted to youth. With the COVID-19 crisis, disruption of health services has further hindered access to RH and FP services. The project will contribute to reverse this trend through (i) restoration of essential RH services such as family planning critical to avert maternal and child mortality, including outreach/mobile strategies for underserved communities ; (ii) expansion of youth-friendly health centers access providing integrated reproductive health services including GBV services; (iii) interventions to generate demand and awareness of RH and GBV services (iv) a strong community engagement component to address social norms on family planning and reproductive health.

106. Overall, this project is expected to have a positive impact on gender given the package to strengthen PHC-level health services, besides restoring essential services such as family planning and immunization services critical to avert maternal and child mortality and expanding access to adolescent reproductive health services, including GBV services, with interventions (i) that will improve the availability and quality of health providers, increasing the population's access to quality RMNCAH-N health services; and (ii) that will increase financial accessibility to health services for the vulnerable population, particularly women, will contribute to improve women and girls' access to health services and improve their well-being.

Climate

107. **The project has been screened for short and long-term climate change and disaster risks. The risk to the project is classified as High due to cyclones, floods caused by storms, extreme rainfall, rising sea levels, and drought.** Madagascar is a large island located off the coast of East Africa in the Southern Hemisphere. Average temperatures are projected to rise by between 1.1°C and 2.6°C by 2065, with the highest projections for the Southern part of the country. Rainfall is also projected to increase for the Southern part of the country during



January–April and October–November and to decrease in May–September with a more significant decrease projected for inland areas. Projections are less certain for Madagascar's Northern regions.

108. There is a direct link between climate change and infectious disease in Madagascar. Rising temperatures and increased rainfall have created optimal conditions for vector-borne pathogens, including malaria and plague, to thrive. A 2018 World Bank Climate and Health Diagnostic for Madagascar identified the increased incidence of malaria as one of the main anticipated health impacts of climate change. Similarly, recent outbreaks of the plague are linked to increased temperatures and rainfall due to climate change. Diarrheal and other waterborne diseases are expected to increase due to increased water reservoirs following flooding as well as the destruction of water and sanitation systems during climate shocks. In addition, deforestation has reduced animals' natural habitats, bringing them closer contact with humans in a country with extensive biodiversity, increasing the risk of climate-related zoonotic infections. Madagascar is also vulnerable to other emerging infectious diseases that thrive in the hot, wet conditions driven by climate change.

109. Madagascar has demonstrated its commitment to addressing climate change, and this project's climate-related activities align with its national and regional—and global—climate priorities. In 2010, Madagascar developed the National Policy to Combat Climate Change to promote and strengthen adaptation activities. The Ministry of the Environment, Ecology, the Sea, and Forests (MEEMF) is responsible for coordinating, implementing, and mainstreaming climate change actions in the social and economic sectors. The National Bureau of Climate Change Coordination, within MEEMF, oversees the implementation of all measures in the country's Intended Nationally Determined Contribution. Additionally, on September 21, 2016, Madagascar ratified the Paris Agreement. Madagascar's Country Partnership Framework with the World Bank also outlines improving climate resilience through climate-smart investments in infrastructure and social protection.

110. The project will address climate change-related vulnerabilities and contribute to enhancing climate resilience and adaptation through the following activities:

Project Component/Subcomponent and Cost	Climate-related action	How will activity address climate-related vulnerabilities?
Component 1: Strengthening Capacities for Pandemic Preparedness and Response (US\$57.1 million equivalent, IDA)	Component 1 will strengthen pandemic preparedness capacities, including for climate-related diseases. The level of climate vulnerability in the country and the extent to which climate has shaped infectious disease transmission, particularly of malaria and the plague, are animating reasons for pandemic preparedness and response activities under this component. The project has identified priority diseases, including two diseases (malaria and the plague) with evidence of a link between climate and disease outbreaks in Madagascar and one disease (Rift Valley Fever) that is endemic to Madagascar and for which there is global evidence of a climate link. In addition, as part of subcomponent 1.2, the project will begin with an assessment to identify additional priority diseases with a focus on climate-related diseases. The entire component will improve climate change resilience by strengthening the country's capacity to prepare for and respond to infectious disease	Improve country's resilience to climate-related disease outbreaks



	outbreaks.	
Additional Component 1 climate adaptation activities, beyond overall pandemic preparedness		
Subcomponent 1.2: Improve Cross-sectoral Coordination, Collaboration, and Capacity for Preparedness and Response (US\$20.1 million equivalent, IDA)	Investments to strengthen emergency response capacity at the local level, including for health aspects of climate emergencies (climate-induced disease outbreaks as well as other climate shocks such as floods, cyclones, and droughts)	Strengthen the country's ability to respond to health aspects of climate shocks
Subcomponent 1.3: Strengthen Human and Animal Disease Surveillance (US\$18.0 million equivalent, IDA)	Digital surveillance approaches to support availability of infectious disease data in climate emergencies when roads and access may be limited	Boost the country's pandemic surveillance system's resilience to climate shocks
Component 2: Strengthening the resilience and performance of basic health services (US\$32.9 million equivalent, IDA)		
Subcomponent 2.2. Strengthen Primary Health Care Financing by Increasing the Autonomy and Accountability of CSBs and Financial Protection for the Poorest (US\$12.9 million equivalent, IDA)	By supporting the implementation of a sustainable mechanism for improved health financing protection for the poorest, the project will reduce the negative impacts of climate change on the poor in the context of Madagascar's high level of climate vulnerability and where 28 percent of the poorest reported being adversely affected by drought, cyclones, and late rains (as of 2012).	Improve the poor's resilience to climate shocks
Subcomponent 2.3. Strengthen Human Resources Management (US\$20.0 million equivalent, IDA)	Inclusion of specific training components on climate shock preparedness and response as part of the revised health worker training curricula	Strengthen the health system's resilience to climate shocks
Component 3: Project Management and Monitoring (US\$10 million equivalent, IDA)	The project's climate-related activities will be monitored under this component.	Strengthen the health system's resilience to climate change

111. The project also intends to mitigate against the impacts of climate change through the measures outlined below:

<i>Planned Climate Mitigation Activities</i>		
Project Component/Subcomponent and Cost	Climate-related action	How will activity mitigate against climate change?
Subcomponent 2.3. Strengthen Human Resources Management (US\$20 million equivalent,	Purchase of solar panels for health facilities and health worker accommodation as part of improvements to working conditions of	Reduce contributions to greenhouse gas emissions



IDA)

health workers

V. GRIEVANCE REDRESS SERVICES

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

VI. KEY RISKS

113. **The overall residual risk for the proposed project is rated Substantial. With the COVID-19 crisis, uncertainties exist regarding institutional capacity (particularly on the political and governance front).** Institutional capacity for implementation and sustainability risk is rated High; political and governance, technical design, sector strategies and policies, fiduciary, and environmental and social risks are rated Substantial.

114. **Institutional capacity for implementation and sustainability risk is rated High.** This rating is mainly due to the need to ensure a multisectoral approach for implementation of the first component of the project and reforms on health financing and HRH supported under the second component. This would require strong institutional capacity. To mitigate this risk, the World Bank will continue to support the MoPH and the PCU and strengthen and support the role of the MoPH in disease outbreak response in general. Collaborative and participatory approaches will be emphasized to build capacity and strengthen the multisectoral approach for pandemic preparedness, as well as the transfer of skills through technical assistance, with support from the Africa Control Disease Center. The focus of some of the project activities on training will further strengthen the institutional capacity of the MoPH and the sustainability of the project for pandemic preparedness and response.

115. **Political and governance risk is rated Substantial.** This rating applies to the entire country portfolio at the program and project levels. Madagascar has a long history of recurring political crises and unconstitutional regime changes that can lead to the withdrawal of donor support and a reduction in foreign direct investment. However, the presidential elections of late 2018 provided an important barometer of Madagascar's overall stability. There is also a risk linked to a lack of progress in setting up and implementing health financial protection mechanisms for the poor. Implementation of the 2015 UHC strategy has been very limited as it is widely perceived as not a priority for the country. The focus of Component 2—strengthening and implementing reforms for health financing and human resources for health—will help mitigate these risks through anticipated improvements in transparency, accountability, and governance in the health sector. Working closely with relevant ministries and directorates and holding consultations with the stakeholders/CSOs would also help mitigate this risk.



116. **Sector strategies and policies risk is Substantial.** Existing health strategies and policies are only partially implemented due to a lack of operationalization plans or a realistic budget reflecting the available financing. This risk will be mitigated by closely monitoring NHSP implementation and key proposed reforms with other partners and ensuring adequate reorientations are integrated based on the context and implementation of those strategies.

117. **Technical design of project risk is rated Substantial.** Implementation of some interventions will require strong multisectoral collaboration (One Health approach for Component 1, such as interoperability of information systems and links between several ministries on HRH and health financing), and sectors are not accustomed to working together. To mitigate this risk, technical assistance will be embedded in the project, and some interventions would also benefit from the support of other technical partners (WHO, Africa CDC).

118. **Fiduciary risk is Substantial.** The overall FM risk for the project is Substantial due to the following factors: (i) Madagascar's fiduciary environment is weak and fiduciary risk includes fraud and corruption; (ii) several agencies, including some at the regional level, will be involved in the implementation or be supporting agencies of the project; and (iii) the concept of PBC is new to the health sector, raising the risk that the project might not fully achieve the expected results. The existing financial arrangements within the PCU are compliant with the Financial Management Manual for World Bank-financed Investment Operations dated February 10, 2017. Procurement-related risks are also rated Substantial due to the overall fiduciary environment described above. Key actions to mitigate these risks will include the following: (i) qualified FM staff in place will be retained and the extension of the technical assistance provided by the fiduciary agency will strengthen the internal control environment and maintain the timeliness and reliability of information produced by the PCU and an adequate segregation of duties; (ii) the capacity building and supervision plan will be put in place in coordination with the World Bank's fiduciary team to ensure that the PCU has the sufficient support and capacity to succeed; and (iii) an independent verification agent will be recruited for the validation of PBC activities. The risk will be further mitigated through continuous project monitoring and supervision by the World Bank and regular reporting on the progress and implementation of fiduciary activities. FM and procurement risk remain Substantial.

119. **Social and environmental risk is Substantial.** The project may generate environment, health, and safety risks due to the medical waste from the project, procured medical supplies and equipment for public health laboratories, and the dangerous nature of reagents and other materials to be used in the project laboratories. Activities linked to laboratory facilities, lab testing, chemical products, surveillance, and the interconnectivity of monitoring systems can have associated risks linked to water and soil contamination due to poor management. For social risk, the project scope (involving many sectors and levels)—and the sensitive nature of the planned outreach campaigns—may involve misunderstanding and social tensions. Project implementation will also involve different types of workers, including PCU staff, health civil servants, local CSOs staff, community health and nutrition workers, which may raise OHS concerns. Based on the nature and magnitude of the activities and investments planned, as well as medical waste due to project activities, potentially adverse impacts on the environment and risks to it are deemed site-specific, reversible, and manageable. The MoPH has mechanisms in place for medical waste disposal and environmental risk management in general. These have been found appropriate in previous World Bank financed operations and meet the WHO protocols for managing infectious waste. No new elements will be added to this operation, however, suggesting that these mechanisms could be jeopardized or generate a need for additional support. SEA/SH risks and impacts induced by the project are classified as Moderate. To mitigate these risks, the MoPH will ensure the avoidance of any form of SEA/SH by



relying on the Environmental and Social code of conduct for all workers implementing the project. The government will ensure that all project workers are adequately instructed and trained on a regular basis on prevention and reporting procedures available for SEA and SH as set out in ESMP and SEP. Neighboring communities will also be made aware of the GM to raise concerns or complaints regarding the conduct of project-related workers and the GM specifically for SEA/SH. The project is elaborating a SEA/SH Prevention and Response Action Plan as part of the ESMF. Finally, the current PCU has limited capacity and experience in managing social risk under ESF. Those risks and impacts are, however, considered temporary, predictable, and can be readily managed through the project's design features and instruments.

**VII. RESULTS FRAMEWORK AND MONITORING****Results Framework****COUNTRY:** Madagascar**Pandemic Preparedness and Basic Health Services Delivery Project****Project Development Objectives(s)**

To strengthen cross-sectoral capacity for pandemic preparedness and response and improve the provision of basic health services and quality of care

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets			End Target
			1	2	3	
Strengthen cross-sectoral capacity for pandemic preparedness and response						
Progress towards establishing an active and functional "One Health" platform (Text)		1: No capacity	2: Limited capacity	2: Limited capacity	3 : Developed capacity	4: Action plan is budgeted and implemented
Interoperable and interconnected real-time electronic notification system (Text)		2 : Limited capacity	3: Developed capacity			
Laboratory Quality System (Text)		1: No capacity	2: Limited capacity	2: Limited capacity	3: Developed capacity	4: Demonstrated capacity
Improve the provision of basic health services and quality of care						
Percentage of CSBs meeting revised national standards (Percentage)		0.00	5.00	15.00	40.00	50.00
Number of women using a modern contraceptive method (Number)		1,913,153.00	1,972,461.00	2,033,607.00	2,096,649.00	2,161,645.00



Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets			End Target
			1	2	3	
Strengthening capacities for pandemic preparedness and response						
Percentage of health districts that have conducted a simulation exercise at least once in the past 24 months (Percentage)		0.00	10.00	20.00	35.00	50.00
Surveillance system in place for priority zoonoses/pathogens (Text)		1: No capacity	2. Limited capacity	3. Developed capacity	3. Developed capacity	4: Demonstrated capacity
Number of reference documents available for the One Health approach (Number)		0.00	3.00	6.00	8.00	8.00
Number of phone surveys conducted to assess service offerings and access to services (Number)		0.00	1.00	2.00	3.00	4.00
Strengthening the resilience and performance of basic health						
Number of children vaccinated with Penta 3 under the project (Number)		0.00	815,000.00	1,680,000.00	2,595,000.00	3,560,000.00
Implementation rate based on payment of communal health programs as of November 30 (Percentage)		30.00	30.00	40.00	75.00	90.00
Share of CSBs in priority areas that have filled medical and paramedical posts in compliance with HR norms (Percentage)	PBC 1	0.00	0.00	30.00	50.00	70.00
Proportion of paramedics in post in		0.00	40.00	50.00	60.00	75.00



Indicator Name	PBC	Baseline	Intermediate Targets			End Target
			1	2	3	
accordance with the standards of positions certifications (Percentage)						
Modernize human resources management (Text)	0.00		1: Adoption of the forward-looking management of staff, jobs and skills + publication of annual HR report	2: Deployment of the Ministry of Health's integrated management system and learning management platform for health workers + publication of annual report	3: Publication of an external audit report on HRM performance + publication of an annual HRM report + availability of a simplified procedure manual	4: 100% of key HR procedures are digitized + publication of annual HRM report
Number of people covered by financial protection mechanisms (Number)	0.00		600,000.00	1,500,000.00	1,800,000.00	1,900,000.00
Percentage of communes of which the CSO assessments are available and shared (Percentage)	0.00		10.00	20.00	30.00	40.00
Number of adolescents using modern contraceptives methods (Number)	374,053.00		385,649.00	397,604.00	409,929.00	422,637.00

Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Progress towards establishing an active and functional "One Health" platform	1. No capacity = No capacity 2. Limited capacity = Established and approved	Annual	Self evaluation of IHR	Evaluation by using JEE tool and results are compiled by the MoPH	MoPH



	governance structure 3. Developed capacity = a multisectoral action plan is developed and approved, 50% of the operational budgets for the implementation of the action plan come from the national budget 4. Demonstrated capacity = The action plan is budgeted and implemented 5. Sustainable capacity = 90% of the operational budgets for the implementation of the action plan come from the national budget		capacities by the Government JEE		
Interoperable and interconnected real-time electronic notification system	1. No capacity = No interoperable, interconnected, electronic real-time reporting system exists 2. Limited capacity = Country is developing an interoperable, interconnected, electronic real-time reporting system, for either public health or veterinary surveillance systems 3. Developed capacity =	Annual	Self assessment of IHR capacities by the Government JEE	Evaluation by using JEE tool and results are compiled by the MoPH	MoPH



	<p>Country has in place an inter-operable, interconnected, electronic reporting system, for either public health or veterinary surveillance systems. The system is not yet able to share data in real-time.</p> <p>4. Demonstrated capacity = Country has in place and interoperable, interconnected, electronic real-time reporting system, for public health and/or veterinary surveillance systems. The system is not yet fully sustained by the host government.</p> <p>5. Sustainable capacity = Country has in place an inter-operable, interconnected, electronic real-time reporting system, including both the public health and veterinary surveillance systems which is sustained by the government and capable of sharing data with relevant stake-holders according to country policies and international obligations.</p>				
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Laboratory Quality System	1. No capacity = There are no national laboratory quality standards 2. Limited capacity = National quality standards have been developed but there is no system for verifying their implementation 3. Developed capacity = A system of licensing of health laboratories that includes conformity to a national quality standard exists but it is voluntary or is not a requirement for all laboratories. 4. Demonstrated capacity = Mandatory licensing of all health laboratories is in place and conformity to a national quality standard is required. 5. Sustainable capacity = Mandatory licensing of all health laboratories is in place and conformity to an international quality standard is required.	Annual	Self evaluation of IHR capacities by the Government JEE	Evaluation by using JEE tool and results are compiled by the MoPH	MoPH
Percentage of CSBs meeting revised national standards	Number of CSBs meeting revised national standards out of all the CSBs in the	Annual	DHIS-2	Routine data	PCU/MoPH



	country. Standards should consider (i) HR availability, (ii) equipment and infrastructure availability and (iii) key medicines availability				
Number of women using a modern contraceptive method	Number of women 15-49 years old using modern contraceptives methods	Quarterly	DHIS-2	Routine data	MoPH

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Percentage of health districts that have conducted a simulation exercise at least once in the past 24 months	Numerator : number of health districts that have conducted a simulation exercise in the past 12 months and at least once in the past 24 months Denominator : total number of health districts within the country (114 in 2022) Simulations include both preparedness and response	Annual	Project reports	Routine data	MoPH/PCU
Surveillance system in place for priority zoonoses/pathogens	1. No capacity = No zoonotic surveillance systems exist 2. Limited capacity = Country has determined zoonotic diseases of	Annual	Self evaluation of IHR capacities by the	Evaluation by using JEE tool and results are compiled by the MoPH	MoPH



	greatest national public health concern but does not have animal zoonotic surveillance systems in place 3. Developed capacity = Zoonotic surveillance systems in place for 1-4 zoonotic diseases/ pathogens of greatest public health concern 4. Demonstrated capacity = Zoonotic surveillance systems in place for five or more zoonotic diseases/ pathogens of greatest public health concern 5. Sustainable capacity = Zoonotic surveillance systems in place for five or more zoonotic diseases/ pathogens of greatest public health concern with system in place for continuous improvement		Government JEE		
Number of reference documents available for the One Health approach	This concerns the following documents: -Report on the epidemic response capacity of the One Health sectors (year 1)- DVSSER -Report on the establishment of funding	Annual	MoPH	Project report	MoPH/PCU



	mechanisms for the One Health coordination platform (year 2)- DVSSER - Report on the Evaluation of human and animal health surveillance systems and networks and the feasibility of interoperability of the different systems (year 2)- DVSSER -Report on methodologies for the harmonization process of surveillance systems and networks (Launch report for the implementation of the one health platform (year 1)- DVSSER Multi-sectoral communication strategy on health risks- DPS -Manuals of procedures for the distribution of material and financial resources- DAAF/DGR -Operational manual for conducting rapid health risk and/or needs assessments -Project Monitoring and Evaluation Manual- DEPSI/PCU				
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Number of phone surveys conducted to assess service offerings and access to services	Requires both a facility-level survey (service provision) and a household-level survey (access to services)	Annual	Project report	Project report	PCU
Number of children vaccinated with Penta 3 under the project	The indicator refers to children between 12 and 59 months of age in the 23 regions that missed vaccination (0 doses or partially vaccinated).	Quarterly	DHIS2	Routine data	MoPH/PCU
Implementation rate based on payment of communal health programs as of November 30		Annual	Project reports	Routine data	PCU
Share of CSBs in priority areas that have filled medical and paramedical posts in compliance with HR norms	There are 800 CSB located in priority areas. They will serve as a basis for the calculation of the indicator	Annual	Project reports	Routine data	MoF/MoPH/PCU
Proportion of paramedics in post in accordance with the standards of positions certifications	The paramedic have passed the unique exam to be valid Numerator : number of paramedics in accordance with the standards of positions certifications Denominator : number of paramedics in post	Annual	Project reports/DHIS 2	Project reports	MoPH
Modernize human resources management	The numbers 0 to 4 define the different stages of HRM management.	Annual	Projects report	Routine data	MoPH/PCU
Number of people covered by financial protection mechanisms	Number of beneficiaries of health financing protection mechanisms supported by the project.	Quarterly	Project reports	Routine data	PCU/MoPH



Percentage of communes of which the CSO assessments are available and shared	Numerator : number of communes of which the CSO assessments are available Denominator : total number of communes The reports will be shared widely at community level, including via commune council meetings, or health committee meetings at the facility level, or public presentations through local radios, and other means The reports will also include information on the issues identified by communities that are addressed by MoPH and local authorities	Annual	Project reports	Routine data	MoPH/PCU
Number of adolescents using modern contraceptives methods	Number of adolescents women using modern contraceptives methods. Adolescent : between 15 and 19 years old	Quarterly	DHIS-2	Routine data	MoPH/PCU



Performance-Based Conditions Matrix

PBC 1	Share of CSBs in priority areas that have filled medical and paramedical posts in compliance with HR norms			
Type of PBC	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Intermediate Outcome	Yes	Percentage	7,500,000.00	5.60
Period	Value		Allocated Amount (USD)	Formula
Baseline	0.00			
End of 2023	30.00		1,500,000.00	scalable
End of 2024	50.00		2,500,000.00	scalable
End of 2025	70.00		3,500,000.00	scalable

Verification Protocol Table: Performance-Based Conditions

PBC 1	Share of CSBs in priority areas that have filled medical and paramedical posts in compliance with HR norms
Description	The indicator measures the percentage of CSB in priority areas that have filled medical and paramedical posts in compliance with HR norm
Data source/ Agency	Court of account report
Verification Entity	Court of auditors
Procedure	

**ANNEX 1: Implementation Arrangements and Support Plan**

COUNTRY: Madagascar
Pandemic Preparedness and Basic Health Services Delivery

Detailed financial management arrangements

- 1. The PCU is currently implementing the World Bank-funded P160848 PARN, the CERC related to the P154698/P157909 Madagascar Sustainable Landscape Management Project,⁴³ the COVID-19 Vaccination Project (P176841), and other donor financings.** Both the PARN and COVID-19 Vaccine projects are broadly in compliance with FM reporting requirements since effectiveness; their FM performances are Moderately Satisfactory. The external audit of PARN issued an unqualified opinion for the financial statement for the fiscal year 2020. The overall FM risk for the PARN and COVID Vaccine projects is deemed Substantial. The FM arrangements already in place are compliant with the FM Manual for the World Bank-financed Investment Operations dated February 10, 2017.
- 2. The proposed mitigation measures will strengthen the internal control environment, maintain the continuous timely and reliability of information produced by the PCU, and provide an adequate segregation of duties.** The following measures will also address risks related to the proposed project: (i) the recruitment of one Financial Management Specialist and one Accountant to support the existing team within the PCU; (ii) the development of the PIM based on the PARN and COVID Vaccine implementation manual and considering the PBF and PBC activities; (iii) the reinforcement of the internal control to closely monitor project operation; (iv) the reinforcement of audit requirements and the use of the Court of Account as an independent verification agent with support of an independent firm to be recruited; and (v) the recruitment of an internal auditor for the project,

PLANNING AND BUDGETING

- 3. The PCU will prepare the AWPB in collaboration with the MoPH and other entities involved in the project, which will be cleared by the project Steering Committee. The AWPB shall be transmitted to the World Bank no later than November 30 of the year preceding the concerned fiscal year. The first AWPB shall be available no later than one month after effectiveness date.**
- 4. The budget will be monitored using the PCU's accounting software.** The periodic variance analysis will enable the timely identification of deviations from the budget. The budget execution analysis will be part of the IFRs that will be submitted to the World Bank on a quarterly basis.
- 5. The FM procedures manual (to be developed as part of the PIM) will describe budgeting and budget monitoring arrangements.**

⁴³ The CERC related to the P154698/P157909 Madagascar Sustainable Landscape Management Project for US\$40 million, activated in September 2020; US\$26 million disbursed in January 2022.



ACCOUNTING AND REPORTING

6. The project will use existing accounting software within the PCU and prepare accounting reports on a modified cash accrual basis with disclosure of commitments. It will comply with the Malagasy General Chart of Accounts (*Plan Comptable Général* 2005), which is broadly in line with International Accounting Standards and International Financial Reporting Standards (IAS/IFRS). The PCU will use the existing accounting software to record the project's financial transactions, monitor budget execution, and prepare financial reports. The accounting records will reflect the project's structure in terms of components and subcomponents and the source of funds. The project will set up the accounting system to record PBC and PBF activities separately.

7. The PCU will prepare quarterly unaudited IFRs for the project in a report format agreed with the World Bank. These IFRs will be submitted to the World Bank within 45 days following the end of the reviewed quarter. At a minimum, the IFR will include (i) a statement of sources and uses of funds for the quarter, year to date, and cumulative to end period (from project inception) reconciled to opening and closing bank balances, (ii) a statement of uses of funds (expenditures) by project component/subcomponent comparing actual expenditures against the budget with explanations for any significant variances; (iii) a progress report of PBC activities, (iv) progress statement of sub-grants distribution, (iv) assets allocation statement, and (v) inventory statement for critical inputs purchased under subcomponent 2.1. The PIM will detail specific reporting requirements for the project components. At the end of each fiscal year, the project will prepare annual financial statements subjected to an external audit.

FUNDS FLOW AND DISBURSEMENT ARRANGEMENTS

8. The PCU will open a Designated Account (DA) denominated in U.S. dollars at the Central Bank of Madagascar (Banky Foiben'i Madagasikara, BFM) to receive funds from the World Bank, per applicable regulations.⁴⁴ A secondary account, denominated in Ariary or U.S. dollars, will be opened at an acceptable commercial bank to enable payment of eligible expenditures. The PIM will describe the process leading to payment and applicable disbursement methods. The Disbursement and Financial Information Letter (DFIL) provisions will be tailored considering the project's needs.

9. The project will use transaction-based disbursements. Disbursements will be made in accordance with the World Bank Disbursement Guidelines for Projects, dated February 2017. An initial advance up to the ceiling of the DA and representing four months of forecasted project expenditures will be payable through the DA following project effectiveness. Subsequent disbursements will be made monthly against submission of the Statement of Expenditures or other documents for PBC and PBF as specified in the DFIL. The project will be allowed to use the following disbursement methods: direct payment, advance, reimbursement, and special commitment.

10. Disbursements against the PBC. A certain amount of the proceeds will be allocated to the PBC. The Recipient can claim this amount as disbursements against eligible expenditures once that PBC has been achieved and verified. Prior to achieving the PBC, the project would have disbursed against some transactions. Such expenditures will only be considered eligible once the PBC is fully achieved. In case of a

⁴⁴ Decree No 2015-1457 amended by the Decree No 2016-1160 defining the modalities of opening, management, and regularization of transactions on the project accounts opened at the Bank.



partial achievement of the scalable PBC, expenditures incurred will be eligible up to the concerned PBC achievement rate. The PIM shall consider procedures to be followed and conditions to be met prior to disbursements of IDA financing. The PIM will include reporting and control arrangements regarding the management of such funds. Annex 2 details PBs monitoring, the verification mechanism, and the related flow of funds.

INTERNAL CONTROLS

11. Internal control comprises the whole system of control, financial or otherwise, established by management to (i) carry out project activities in an orderly and efficient manner, (ii) ensure adherence to policies and procedures, (iii) ensure maintenance of complete and accurate accounting records, and (iv) safeguard project assets. The PIM will include a section on FM outlining project-specific requirements regarding the budget, accounting, internal control and internal audit, funding flows, auditing, transaction coding and reporting, as well as the FM roles and responsibilities within the PCU. The PCU will develop the PIM for the new project based on the PARN and COVID-19 Vaccine PIM, including all key internal control processes pertaining to the various project activities (CSB grants, PBC, and PBF). The controls will be developed to address the risk stemming from the project's high level of decentralization.

12. The PCU will recruit one Financial Management Specialist and one Accountant to support the existing team. The Finance Manager of the PCU will oversee the FM tasks related to the project. A fiduciary agency was recently recruited under the PARN project to ensure the capacity building of FM staff in each MoPH Department involved in the project implementation as well as prior review of transactions, over certain thresholds, according to terms of reference agreed with the World Bank. The technical assistance provided by this agency will be extended to this project.

AUDITS, INTEGRITY ISSUES

Internal audit

13. Given the additional workload stemming from this operation and the elevated risks due to its degree of decentralization, the PCU shall consider extending the mandate of the private internal audit firm recruited under the Vaccine project to work closely with the internal auditor in place. For the proposed project, the internal audit firm will include the review of the project in its audit plan and will conduct at least two regular internal audits annually for this project. The audit plan shall consider a review of grants and all activities at the decentralized level. Reports shall be communicated to the World Bank 30 days after the audit mission.

External financial audit

14. The external audit of the project financial statements will be carried out by an independent audit firm acceptable to the World Bank. The audit will comply with the International Standards on Auditing. The audit report will be furnished to the World Bank within six months after the end of the project fiscal year. The World Bank will review the terms of reference and the shortlist of audit firms. In line with the new access to information policy, the project will comply with the World Bank's Access to Information Policy 2010.



15. The Court of Account (CA) will lead the verification of PBC achievement. An Independent Verification Agent (IVA) appointed by the PIU, with terms of reference and qualifications satisfactory to the World Bank, will support the CA. The project expenditures framework and the PBCs (result) verification mechanism will be clearly described in the PIM. The PIU will submit the interim semiannual results report on PBCs achievement, including information on the project expenditures. The report shall be submitted to the World Bank no later than forty-five days after the end of semester.

Fraud and corruption (F&C)

16. The PCU will maintain adequate F&C arrangements during the project's lifespan. The PIM will include a section on fraud and corruption, taking the World Bank Guidance on Prevention of Fraud and Corruption into account. A well-designed grievance mechanism is in place within the PCU for the implementation of the PARN and COVID Vaccine projects. The PCU has experienced challenges that hinder the efficient collection of feedback from beneficiaries and stakeholders. The mechanism in place will be strengthened for project implementation based on the recommendations of the governance audit of the PCU (to be finalized by June 2022).

IMPLEMENTATION SUPPORT

17. The World Bank's FM team will provide implementation support over the project's lifespan. Following a risk-based approach, supervision will focus on the effective operation of the proposed arrangements, including the review of audit reports, IFRs, and internal audit reports. The FMS will also provide advice to the task team on all FM issues. Based on the current assessed risks (table 5 below), and on a preliminary basis, the project will be supervised at least twice a year and may be adjusted as and when the need may arise.

FIDUCIARY RISKS AND MITIGATIONS MEASURES FOR THE PROPOSED PROJECT

Table 5: Fiduciary risks and mitigations measures for the proposed project

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Conditions for Effectiveness (Y/N)	Residual Risk
Inherent risk	H			S
Country level: The MoPH system mirrors the Central level PFM system and its weaknesses resulting in risk of lack of transparency and accountability in the use of public funds.	H	The country PFM systems are assessed as weak. The Government of Madagascar is committed to implement further reforms of the country's PFMs (with support from the development partners).	N	H
Entity level: Financial management requirements may not be met, weak financial management capacity	S	The PCU will recruit one Financial Management Specialist and one Accountant to support the existing staff that possesses adequate experience and competence. The PCU will extend the assistance of the	N	S



		fiduciary agency recruited within the PARN, to this new project.		
Project level: The resources of the project may be diverted due to weak control environment. PBC: Expenditures occurred followed the World Bank fiduciary procedures but could be considered ineligible due to lack of agreement on or wrong interpretation of the result supposed achieved.	S	The PCU will comply with the internal control processes as set out in the PIM. The internal auditor, with additional support, will also continuously review the adequacy of internal controls and make improvement recommendations. Clearly defined institutional arrangements, controls procedures, and arrangement for PBC will be documented in the PIM. The CA supported by an IVA will conduct the verification of PBC achievement.	N	S
Control Risk				
Budgeting: Weak budgetary execution and control leading to budgetary overruns or inappropriate use of project funds.	S	The PCU will develop the budget of this project discussed with all stakeholders within the MoPH and approved by the Steering Committee. The PCU will comply with FM procedures that will be defined in the PIM in terms of budgeting and budgetary control arrangements to ensure appropriate budgetary oversight. The budget follow-up will be documented in the quarterly IFR.	N	M
Accounting: Reliable and accurate information not provided to inform management decision	S	The PCU will maintain qualified and experienced FM staff to ensure appropriate performance of the accounting and financial management functions. The PCU will be reinforced by one Financial Management Specialist and one Accountant. The financial reporting preparation will be facilitated by the utilization of appropriate accounting software.	N	M
Internal Control: Business process, role and responsibilities within the project is not clear leaving to ineffective of control. Weaknesses of fixed assets and inventory management leading to loss for the project. Internal auditors lack capacity to	H	The PCU will develop PIM for the new project based on the PARN and vaccine project manuals. The PIM will clearly describe will describe comprehensive procedures with regard to the contracts management, the assets and inventory's management, measures to address the risk from the high level decentralization. The PIM will also consider the World Bank guidance on	N	S



assess the effectiveness of risk management and control over the management of PBCs Lack of transparency over the selection of PBF beneficiaries and verification protocols		prevention of fraud and corruption. Internal audit unit will be strengthened, and the audit plan will be reviewed by the World Bank. A private firm recruited under COVID-19 Vaccination project will support the existing team to conduct the internal audit review of the project. An Independent Verification Agent will be recruited under the terms and conditions acceptable to the World Bank to support the Court of Account.		
Funds Flow: <i>Liquidity risk</i> The government is not properly informed of the requirements, timelines for submission of documents (including for Direct Payments) as well as of the serious consequences for non-compliance with payment requirements causing delay in the payment of suppliers Potential disruption in the disbursement due to non-compliance with the national regulation in terms of entry in the State budget, annual commitment, documentation of budget execution.	H	The process leading to payment as well as applicable disbursement methods will be described in the PIM. The Disbursement and Financial Information Letter provisions will be tailored considering the projects need. The PCU with the support of the MoPH will ensure full compliance with national regulation. The PIM will clearly define the prerequisites of the withdrawal applications clearance by the MoF.	N	S
Financial Reporting: The project may not be able to produce the financial reports required in a timely manner as required for project monitoring and management	S	The PCU will recruit additional staff to support the existing team. The PCU will use the existing accounting software deemed adequate. The software will enable the efficient and timely generation of financial information. The IFR format will be defined prior to the negotiations.	N	M
Auditing: Delays in submission of audit reports. Poor quality of audit report	S	The external audit will be performed by a private audit firm. The TOR will be prepared no later than one month after the effectiveness date to enable early recruitment.	N	M



		The accounting software will lead to timely generation of quality reports.		
Integrity issues Errant practices such as mis-procurement and misuse of funds are critical issues	H	The PIM will describe enhanced controls over project activities, considering the World Bank fraud and corruption prevention guidelines. Financial audits will be conducted annually over the use of financing for the entire project. The PCU will put in place and maintain a robust grievance to ensure the adequacy of the vaccine distribution mechanism.	N	S
Overall FM risk	H			S

18. The Financial Management Action Plan described below in table 6 has been developed to strengthen further the internal control and mitigate the overall financial management risks.

Table 6: Financial Management Action Plan

Remedial Action Recommended	Responsible Entity	Completion Date	Effectiveness Conditions
Agree on IFRs format enabling the project monitoring	PCU/World Bank	Agreed	No
Develop the PIM based on the PARN and vaccine project manuals integrating particularities of the project in terms of selection of PBF beneficiary's selection and payments, PBC execution and verification protocols, controls over subgrants, frauds and corruption prevention measures.	PCU	No later than 1 months after the effectiveness date	No
Recruit the external auditor.	PCU	No later than 3 months after the effectiveness date	No
Recruit one FM Specialist and one Accountant to support the existing team within the PCU	PCU	No later than 3 months after the effectiveness date	No
Extend fiduciary agency mandate to support further with the new operation (or new recruitment)	PCU	No later than 3 months after the effectiveness date	No
Prepare the first AWPB and submit to the World Bank	PCU	No later than 1 month after the effectiveness date	No
Extend internal audit firm mandate to cover the new operation	PCU	No later than 3 months after effectiveness	No



DETAILED IMPLEMENTATION ARRANGEMENTS BY SUBCOMPONENT

Table 7. Implementation Arrangements by Subcomponents

Project Components	Main Technical Lead	Other Entities Involved	Coordination Mechanism
Component 1: Strengthening Capacities for Pandemic Preparedness and Response			
<i>Subcomponent 1.1: Develop necessary assessments to implement One Health approach</i>	Directorate of Health Monitoring, Epidemiological Surveillance and Response from MoPH	Ministry of Agriculture and Livestock (MoAL), Ministry of Environment and Sustainable Development (MoESD)	
<i>Subcomponent 1.2: Improve cross-sectoral coordination, collaboration, and capacity for preparedness and response</i>	Directorate of Health Monitoring, Epidemiological Surveillance and Response from MoPH and Directorate of Veterinary services of MoAL	Ministry of Justice, Ministry of Finance, Ministry of Environment and Sustainable Development, Ministry of Higher Education and Scientific Research, Africa CDC, WHO, OIE	Multisectoral coordination platform One Health to be set up
<i>Subcomponent 1.3: Strengthen human and animal disease surveillance systems</i>	Directorate of Health Monitoring, Epidemiological Surveillance and Response from MoPH and Directorate of Veterinary services from MoAL	Ministry of Environment and Sustainable Development, Ministry of Higher Education and Scientific Research, Africa CDC, WHO, OIE, Pasteur Institute of Madagascar	Multisectoral coordination platform One Health
<i>Subcomponent 1.4: Strengthen the quality of laboratories</i>	Directorate of Health Monitoring, Epidemiological Surveillance and Response from MoPH and Veterinary Diagnostic Laboratories Service from MoAL; for Research CNARP from MHESR	Ministry of Environment and Sustainable Development, Ministry of Higher Education and Scientific Research (MHESR), Africa CDC, WHO, OIE, Pasteur Institute of Madagascar	Multisector Antimicrobial Resistance Coordination Committee and Network of laboratories in Madagascar (RESAMAD: Réseau de laboratoires à Madagascar)
Component 2: Strengthening the Resilience and Performance of Basic Health Services			
<i>Subcomponent 2.1: Ensure the availability of essential health services</i>	Directorate of Family Health and Directorate of EPI from MoPH	Ministry of Population, Ministry of Youth for ASRH, USAID, UNFPA	
<i>Subcomponent 2.2: Strengthen primary health care financing by increasing the autonomy and accountability of CSBs and financial protection for the poorest</i>	CA-CSU General Directorate of Resources from MoPH	For financial protection: Ministry of Finance, Ministry of Social Protection, WHO, ILO, UNICEF For allocation to CSB: Presidency, Ministry of Decentralization, Ministry of Finance, UE	For financial protection: UHC Steering Committee For allocation to CSB: Task force on allocation to CSBs (regular meetings under leadership of Presidency)
<i>Subcomponent 2.3:</i>	Preservice Institution	Ministry of Public Service,	Inter-ministerial



<i>Strengthen human resources management</i>	Directorate and Human Resources Directorate from MoPH	Ministry of Higher Education, Faculty of Medicine	committee on unique exam
Component 3: Project Management and Monitoring	PCU		Steering committee of the project
Component 4: Contingent Emergency Response	PCU		

**ANNEX 2: Disbursement through a PBC**

1. Subcomponent 2.3 will partially disburse against the achievement of PBCs and defined project expenditures. These project expenditures will be financed with government resources and reimbursed with the project financing upon confirmed achievement of the PBCs. The disbursement will be made directly to the accounts of the relevant beneficiaries identified by the government.

2. PBC 1: Share of CSBs in priority areas that have filled medical and paramedical posts in compliance with HR norms (US\$7.5 million). The PBC will incentivize improved coordination and synergies among ministries involved in HRH reforms (Health, Finance, Education, Interior) to ensure the equitable distribution of health professionals throughout the country. The indicator “Share of CSBs in priority areas that have filled medical and paramedical posts in compliance with HR norms” captures the impact of the incentive ‘packages’ to attract and retain health professionals in CSBs in priority areas. The funds will only be released upon verification of the professional taking up a position in the priority areas for a specific period and effectively receiving the remote-based monetary allowances. An appointed independent agency (to support the Court of Account) acceptable to the World Bank will independently validate the submitted results. All results (including the verification of effective payments to a sample of health workers) must be accepted and cleared by the World Bank before payments are made. The PIM will detail the cost and parameters of the incentives and benefit package and criteria for identifying priority areas (for example, based on geographical location and accessibility). Each beneficiary will receive the incentives from the project for not more than three years. Recipients must remain in their post to continue to receive the package. The government may commit to continue the payment for similar incentives and benefits to the individuals after the project’s fourth year. The process and request for release of funds will be detailed in the PIM and will ensure transparency and traceability of funds.

3. Project expenditures. The project expenditures framework will be part of the PIM. The process and request for release of funds will be detailed in the PIM and will ensure the transparency and traceability of funds. The proposed project expenditures list was discussed, and PBC 1 (US\$7.5 million) project expenditures defined, as follows:

- Government transfers of remote area allowances to health staff in priority areas
- Government transfers of funds for primary health care facilities (*Centres de Santé de Bas*, CSB) to the *commune* level in priority areas

4. Verification protocol: The Department of Human Resources (DRH) and the Department of Financial Affairs (DAF), with support from the PCU and the Ministry of Finance, will submit evidence of each target achievement for verification and validation. The yearly indicator is scalable and is considered met (i) when a budget line is provisioned each year in the Finance Law related to government transfers of remote allowances to health staff in priority areas; (ii) if sufficient staffing positions for medical and paramedical position in priority areas have been appropriated in the Finance Law; (iii) upon verification of the health staff taking up a position in the priority area for a specific period and effectively receiving the remoteness premiums consistent with the provisions of the regulatory framework and/or PIM. The Court of Account, with the support of independent agency hired by the project and acceptable to the World Bank, will independently validate the submitted results. All results (including verification of effective payments on a sample of health workers) must be accepted and cleared by the World Bank before payments are made. Verification will be done quarterly and presented annually. Evidence will consist of:

- Quarterly reports submitted by the DRH and DAF to the PCU and Court of Account



- Data extracts from relevant information systems, including the Integrated Public Fiscal Management System (SIGFP), Augure, DHIS2
- Relevant legal/regulatory texts formalizing the nomination of staff to specific positions submitted by the DRH and DAF to the PCU and Court of Account
- Annual audit report

5. Verification entity: Court of Account supported by an Independent Verification Agency. The project will capitalize on tools and skills developed over the last five years within the Court of Account to deal with the PBC. The Court has implemented an online platform to support its mandate.