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Report No: PAD4546

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT
IN THE AMOUNT OF SDR 69.3 MILLION
(US$100 MILLION EQUIVALENT)

TO THE

REPUBLIC OF MADAGASCAR

FOR A

SUPPORT TO COVID-19 VACCINE PURCHASE AND HEALTH SYSTEM STRENGTHENING PROJECT

JUNE 24, 2021

UNDER THE COVID-19 STRATEGIC PREPAREDNESS AND RESPONSE PROGRAM (SPRP)

USING THE MULTIPHASE PROGRAMMATIC APPROACH (MPA)

WITH A FINANCING ENVELOPE OF

UP TO US$6 BILLION APPROVED BY THE BOARD ON APRIL 2, 2020 AND
UP TO US$12 BILLION ADDITIONAL FINANCING APPROVED BY THE BOARD
ON OCTOBER 13, 2020

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

CURRENCY EQUIVALENTS

Exchange Rate Effective May 31, 2021

Currency Unit =	Malagasy Ariary (MGA)
3,753.33 =	US$1
US$1 =	SDR 0.69

FISCAL YEAR
January 1 - December 31

Regional Vice President:	Hafez M. H. Ghanem
Country Director:	Idah Z. Pswarayi-Riddihough
Regional Director:	Amit Dar
Practice Manager:	Ernest E. Massiah
Task Team Leader:	Maud Juquois

ABBREVIATIONS AND ACRONYMS

AEFI	Adverse Events Following Immunization
AF	Additional Financing
AfDB	African Development Bank
AMC	Advanced Market Commitment
AU	African Union
AUP	Agreed Upon Procedures
AVATT	African Vaccine Acquisition Task Team
AZD1222	AstraZeneca Vaccine
BFP	Bank Facilitated Procurement
CCIA	Committee for Interagency Coordination for Vaccination
CDC	Center for Disease Control
CHW	Community Health Workers
CPF	Country Partnership Framework
COVAX	COVID-19 Vaccine Global Access
COVID-19	Coronavirus Disease 2019
DEC	Development Economics
DFIL	Disbursement and financial information letter
DHIS2	District Health Information System Software
DP	Development Partners
DRS	Regional Health Directorates
DPF	Development Policy Financing
DPO	Development Policy Operation
DTP	Diphtheria, Tetanus, Pertussis
EID	Emerging Infectious Diseases
E&S	Environmental and Social
EMT	Emergency Medical Teams
EPI	Expanded Program on Immunization
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Safeguards
EU	European Union
EUL	(WHO) Emergency Use Listing
EVD	Ebola Virus Disease
FMFA	Financial Management Framework Agreement
FCTF	Fast Track COVID-19 Facility
FCV	Fragility, Conflict and Violence

FM	Financial Management
FY	Fiscal Year
GAVI	GAVI, the Vaccine Alliance
GBV	Gender Based Violence
GDP	Gross Domestic Product
GFF	Global Financing Facility for Women, Children and Adolescents
GNI	Gross National Income
GoM	Government of Madagascar
GPE	Global Partnership for Education
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
GTTN	*Groupe Technique de Travail National* (National Technical Working Group)
HCI	Human Capital Index
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFC	International Finance Corporation
IFR	Interim Unaudited Financial Reports
IMF	International Monetary Fund
INE	National Statistics Institute
IPF	Investment Project Financing
LEAD	Least-Cost Electricity Access Development Project
MEEMF	Ministry of the Environment, of Ecology, the Sea, and Forests
MICS	Multi-Indicators Cluster Survey
MFI	Microfinance Institutions
M&E	Monitoring and Evaluation
MoPH	Ministry of Public Health
MPA	Multiphase Programmatic Approach
MWMP	Medical Waste Management Plan
NCD	Non-Communicable Diseases
NGO	Non-governmental Organization
NGS	Next-Generation Sequencing
NVDP	National COVID-19 Vaccination and Deployment Plan
OHS	Occupational Health and Safety
PAD	Project Appraisal Document
PARN	Improving Nutrition Outcomes using the Multiphase Programmatic Approach Project *(Projet d'Amélioration des Résultats Nutritionnels)*
PCU	Project Coordination Unit
PDO	Project Development Objective

PrDO	Program Development Objective
PEF	Pandemic Emergency Financing Facility
PFM	Public Financial Management
PID	Personally Identifiable Data
PIM	Project Implementation Manual
PPE	Personal Protective Equipment
PPSD	Project Procurement Strategy for Development
PQ	WHO Prequalification
PSC	Project Steering Committee
RMNCAH-N	Reproductive, Maternal, Neonatal, Adolescent and Child Health and Nutrition
SAGE	Strategic Advisory Group of Experts
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
SEP	Stakeholder Engagement Plan
SII	Serum Institute of India
SME	Small and Medium-sized Enterprises
SOE	Statement of Expenditures
SPRP	Strategic Preparedness and Response Program
SRA	Stringent Regulatory Authority
STEP	Systematic Tracking of Exchanges in Procurement
THE	Total Health Expenditure
TOR	Terms of Reference
U5MR	Under-Five Mortality Rate
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Emergency Fund
VAC	World Bank’s Vaccine Approval Criteria
VDDM	Vaccine Delivery and Distribution Manual
VIRAT	Vaccine Introduction Readiness Assessment Tool
VRAF	Vaccine Readiness Assessment Framework
VLMIS	Vaccine Logistics Management and Information System
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
WBG	World Bank Group
WPAB	Work Plan and Annual Budget

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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name
Madagascar	Support to COVID-19 Vaccine Purchase and Health System Strengthening

Project ID	Financing Instrument	Environmental and Social Risk Classification
P176841	Investment Project Financing	Substantial

Financing & Implementation Modalities

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

Expected Project Approval Date	Expected Project Closing Date	Expected Program Closing Date
22-Jun-2021	30-Jun-2024	31-Mar-2025

Bank/IFC Collaboration
No

MPA Program Development Objective

The Program Development Objective is to prevent, detect and respond to the threat posed by COVID-19 and strengthen national systems for public health preparedness

MPA Financing Data (US$, Millions)

MPA Program Financing Envelope	18,000.00

Proposed Project Development Objective(s)

This Project's Development Objective is to support the Government of Madagascar to acquire and deploy COVID-19 vaccines, and to strengthen its immunization services.

Components

Component Name	Cost (US$, millions)
1-Acquisition of Project COVID-19 vaccines and medical supplies	71.00
2-Strengthening health system for the effective deployment of Project COVID-19 vaccines	29.00
3-Contingent Emergency Response	0.00

Organizations

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

MPA FINANCING DETAILS (US$, Millions)

Board Approved MPA Financing Envelope:	18,000.00
MPA Program Financing Envelope:	18,000.00
of which Bank Financing (IBRD):	9,900.00
of which Bank Financing (IDA):	8,100.00
of which other financing sources:	0.00

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	100.00
Total Financing	100.00

of which IBRD/IDA	100.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	100.00
IDA Grant	100.00

IDA Resources (in US$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
Madagascar	0.00	100.00	0.00	100.00
National PBA	0.00	100.00	0.00	100.00
Total	**0.00**	**100.00**	**0.00**	**100.00**

Expected Disbursements (in US$, Millions)

WB Fiscal Year	2021	2022	2023	2024
Annual	0.00	50.00	30.00	20.00
Cumulative	0.00	50.00	80.00	100.00

INSTITUTIONAL DATA

Practice Area (Lead)
Health, Nutrition & Population

Contributing Practice Areas

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	Substantial
9. Other	Substantial
10. Overall	High
Overall MPA Program Risk	High

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

Have these been approved by Bank management?

[✓] Yes [ ] No

Is approval for any policy waiver sought from the Board?

[ ] 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

Schedule 2, Section 1, A.1. a: The Recipient shall not later than one month after the Effective Date establish and thereafter maintain, throughout Project implementation, the Project Steering Committee ("PSC"), with composition and mandate acceptable to the Association.

Sections and Description

Schedule 2, Section 1, A.3. a: The Recipient shall not later than one month after the Effective Date expand the scope of the mandate of the Project Coordination Unit ("PCU") to cover this Project and thereafter maintain the PCU, throughout Project implementation, under the responsibility of the Ministry of Health, with mandate, composition and resources acceptable to the Association. In particular, the Recipient shall, at all times during Project implementation, maintain sufficient staff [at national and local level], each with adequate terms of reference, qualifications and experience for the Project, acceptable to the Association.

Sections and Description

Schedule 2, Section 1, A.3. b:To this end, the Recipient shall, not later than one (1) month after the Effective Date, expand the PCU with the following key personnel: (i) a dedicated focal point for the proposed project; (ii) a procurement officer; (iii) a senior accountant; (iv) an accountant; (v) an environmental and social safeguards specialist; (vi) a social mobilization and communication specialist; and (vii) a monitoring and evaluation specialist; each of whose recruited on the basis of terms of reference, qualifications and experience acceptable to the Association.

Sections and Description

Schedule 2, Section 1, A.3. c: The Recipient shall, not later than three (3) months after the Effective Date, recruit on the basis of terms of reference, qualifications and experience acceptable to the Association, an internal auditor.

Conditions

Type	Financing source	Description
Disbursement	IBRD/IDA	Schedule 2, Section III, B.1 (a): No withdrawal shall be made for payments made prior to the Signature Date, except that withdrawals up to an aggregate amount not to exceed SDR 13,860,000 may be made for payments made prior to this date but on or after April 30, 2021, for Eligible Expenditures under Category (1).
Type	Financing source	Description
Disbursement	IBRD/IDA	Schedule 2, Section III, B.1 (b): No withdrawal shall be made under Category (2), unless and until: (i) the PIM, including the VDDM, have been duly adopted in form and substance acceptable to the Association and in accordance with Section I.B of Schedule 2 to this Agreement; and (ii) the Recipient has prepared, consulted upon, disclosed and adopted the ESMF, the SEP, the LMP, and the MWMP, all in form and substance acceptable to the Association and in accordance with the ESCP.
Type	Financing source	Description
Disbursement	IBRD/IDA	Schedule 2, Section III, B.1 (c): No withdrawal shall be made for Emergency Expenditures under Category (3),

		unless and until all of the following conditions have been met in respect of said expenditures: (i) (A) the Recipient has determined that an Eligible Crisis or Emergency has occurred, and has furnished to the Association a request to withdraw Financing amounts under Category (3); and (B) the Association has agreed with such determination, accepted said request and notified the Recipient thereof; and (ii) the Recipient has adopted the CERC Manual and Emergency Action Plan, in form and substance acceptable to the Association.

I. PROGRAM CONTEXT

A. MPA Program Context

1. This Project Appraisal Document (PAD) describes Madagascar's response under the COVID-19[1] Strategic Preparedness and Response Program (SPRP) using the Multiphase Programmatic Approach (MPA), approved by the World Bank's Board of Executive Directors on April 2, 2020 (Report No. PCBASIC0219761) with an overall Program financing envelope of up to US$6.00 billion, and the US$12.00 billion Additional Financing (AF) to the SPRP approved on October 13, 2020[2].

2. The project will provide financing and technical assistance to help the government purchase and deploy COVID-19 vaccines that meet the World Bank's Vaccine Approval Criteria (VAC), and to strengthen immunization services for the future. The proposed project will finance vaccine acquisition to immunize up to approximately 20 percent of the population. Additional project support for immunization services will help deploy COVID-19 vaccines to 40 percent of the population, complementing support from the COVID-19 Vaccines Global Access Facility (COVAX) and other partners. Project financing for COVID-19 vaccines will follow the World Bank's updated VAC. As of April 16, 2021, the World Bank will accept as threshold for eligibility of IBRD/IDA resources in COVID-19 vaccine acquisition and/or deployment under all World Bank-financed projects: (i) the vaccine has received regular or emergency licensure or authorization from at least one of the Stringent Regulatory Authorities (SRAs) identified by the World Health Organization (WHO) for vaccines procured and/or supplied under the COVAX Facility, as may be amended from time to time by WHO; or (ii) the vaccine has received WHO Prequalification (PQ) or WHO Emergency Use Listing (EUL). Madagascar is providing vaccines free of charge.

3. The proposed project contributes directly to the development objective of the Global MPA to prevent, detect and respond to the threat posed by COVID-19 and strengthen national systems for public health preparedness. Madagascar's first COVID-19 vaccination campaign is targeting 20 percent of the population who are considered the most vulnerable to COVID-19 infection. The project will support the scale up of this vaccination effort to 40 percent of the population. This is occurring in a rapidly evolving context, where COVID-19 variants have emerged, new vaccines are coming on the market, and there is growing vaccine hesitancy among the general population and health providers. Reaching a sufficient level of immunity in the population will require strengthening overall immunization services and health systems. Importantly, the operation seeks to reduce COVID-19 vaccination avoidance and incomplete coverage and leverage the demand for COVID-19 vaccination for adults. Supporting the Government of Madagascar (GoM)'s efforts to implement its National Vaccination and Deployment Plan (NVDP), the project aligns with the World Bank's crisis response support to COVID-19 in Madagascar, and Madagascar's adjusted World Bank Group (WBG) Country Partnership Framework (CPF) (Report no. 114744-MG).

[1] COVID-19: Coronavirus Disease 2019

[2] Strategic Preparedness and Response Program (SPRP), also known as Global COVID-19 MPA. The World Bank approved a US$12 billion WBG Fast Track COVID-19 Facility (FTCF or "the Facility") to assist IBRD and IDA countries in addressing the global pandemic and its impacts. Of this amount, US$6 billion came from IBRD/IDA and US$6 billion from the International Finance Corporation (IFC). The IFC subsequently increased its contribution to US$8 billion, bringing the FTCF total to US$14 billion. The Additional Financing of US$12 billion (IBRD/IDA) was approved on October 13, 2020 to support the purchase and deployment of vaccines as well as strengthening the related immunization and health care delivery system.

Box 1: Summary of the proposed Project

What this project will finance:

- Procurement of vaccines to cover 20 percent of Madagascar's population (the COVAX Advanced Market Commitment (AMC) will provide vaccines to cover an additional 20 percent of the population).
- Deployment of the vaccines procured under the project as well as vaccines financed and provided by COVAX AMC (covering a total of 40 percent of the population).
- Medium to long-term investments for strengthening immunization services.
- The project may finance the procurement of booster shots when and if they become available.

Vaccine prices, getting to 50.5 percent population coverage, and potential booster shots:

- Costs for vaccine acquisition are estimates at this stage, and actual costs will depend on international market prices at the time of acquisition.
- GoM aims to vaccinate 50.5 percent of its population. It is expected that the vaccines that cannot be purchased under the project nor provided by COVAX AMC will be financed by GoM and/or contributions from other development partners.

B. Updated MPA Program Framework

4. Table 1 highlights how this project fits into the total envelope of the MPA Program.

Table 1: MPA Program Framework

Phase #	Project ID	Sequential or Simultaneous	Phase's Proposed Development Objective*	IPF, DPF or PforR	Estimated IBRD Amount (US$ million)	Estimated IDA Amount (US$ million)	Estimated Other Amount (US$ million)	Estimated Approval Date	Estimated Environmental & Social Risk Rating
2	P176841	Simultaneous	To support the Government of Madagascar to acquire and deploy COVID-19 vaccines, and to strengthen its immunization services	IPF	0	100	0	June 24, 2021	Substantial
Total			**Board Approved Financing Envelope**		**9,900**	**8,100**	**18,000**		

5. All projects under SPRP are assessed for Environmental and Social Framework (ESF) risk classification following the World Bank procedures and the flexibility provided for COVID-19 operations.

C. Learning Agenda

6. The proposed project under the MPA Program will support adaptive learning throughout the implementation, as well as from international organizations including the WHO, International Monetary Fund (IMF), Center for Disease Control (CDC), United Nations Children's Emergency Fund (UNICEF), and others. The global MPA includes the following:

- *Forecasting:* Modeling the progression of the pandemic, both in terms of new cases and deaths, as well as the economic impact of disease outbreaks under different scenarios.

- *Technical:* Cost and effectiveness assessments of prevention and preparedness activities; research may be financed for the re-purposing of existing anti-viral drugs and development and testing of new antiviral drugs and vaccines.

- *Supply chain approaches*: Assessments may be financed on options for timely distribution of medicines and other medical supplies.

- *Social behaviors:* Assessments on the compliance and impact of social distancing measures under different contexts.

II. CONTEXT AND RELEVANCE

A. Country Context

7. The 2020 Human Capital Index (HCI) estimates that a child born today in Madagascar will be only 39 percent as productive as an adult than if he or she enjoyed complete education and full health[3]. Worse, Madagascar's trendline for the HCI has remained unchanged over the last decade. The stunting rate among young children is 42 percent, the fourth highest in the world. Education outcomes are also weak: children who enter school at age 4 can expect to get 8.4 years of schooling, but when adjusted for actual learning, they can only expect to get 4.7 years. These alarming outcomes are closely linked to reduced adult productivity. With children unable to reach their full potential, the country will not have the kind of labor force required to fuel a productive economy that can create jobs, boost shared prosperity, and reduce poverty in the long-term.

8. Madagascar's economic performance was robust before the COVID-19 pandemic, and structural reforms were ongoing. Following a prolonged period of political instability and economic stagnation over the period 2009-2013, growth accelerated to reach an estimated 4.8 percent in 2019, its fastest pace in over a decade. The return to constitutional order in 2013 was instrumental in this economic revival, as it contributed to restoring investor confidence, reopening access to key export markets, reinstating flows of concessional financing, and encouraging structural reforms. The government's reform agenda was supported by World Bank development policy and investment operations in support of human development, governance, and a conducive climate for private-sector-led growth, which contributed to the successful turnaround. Despite a steady decline in previous years, the percentage of the population living below the international poverty line of US$1.90 (2011 purchasing power parity) per day was still estimated at 74.5 percent in 2019, significantly higher than the regional average of 41 percent.

9. Extreme poverty increased significantly in 2020, with vulnerable populations in urban areas particularly affected. Job losses in key manufacturing and service sectors, as well as the sudden loss of income for informal workers affected by lockdowns in major cities contributed to pushing a large number of people into extreme poverty. Against this background, the poverty rate (at US$1.90/day) is estimated to rise to 79.7 percent in 2020,

[3] HCI 2020 Madagascar Country Brief, World Bank, October 2020.
https://databank.worldbank.org/data/download/hci/HCI_2pager_MDG.pdf?cid=GGH_e_hcpexternal_en_ext

up from 76.5 percent in 2019. Urban populations were more immediately affected by the COVID-19 shock, but rural households were impacted as well by contracting demand, particularly for off-farm activities. The COVID-19 crisis also coincided with severe droughts in the Southern part of Madagascar, hampering livelihoods of at least 1.5 million people so far.

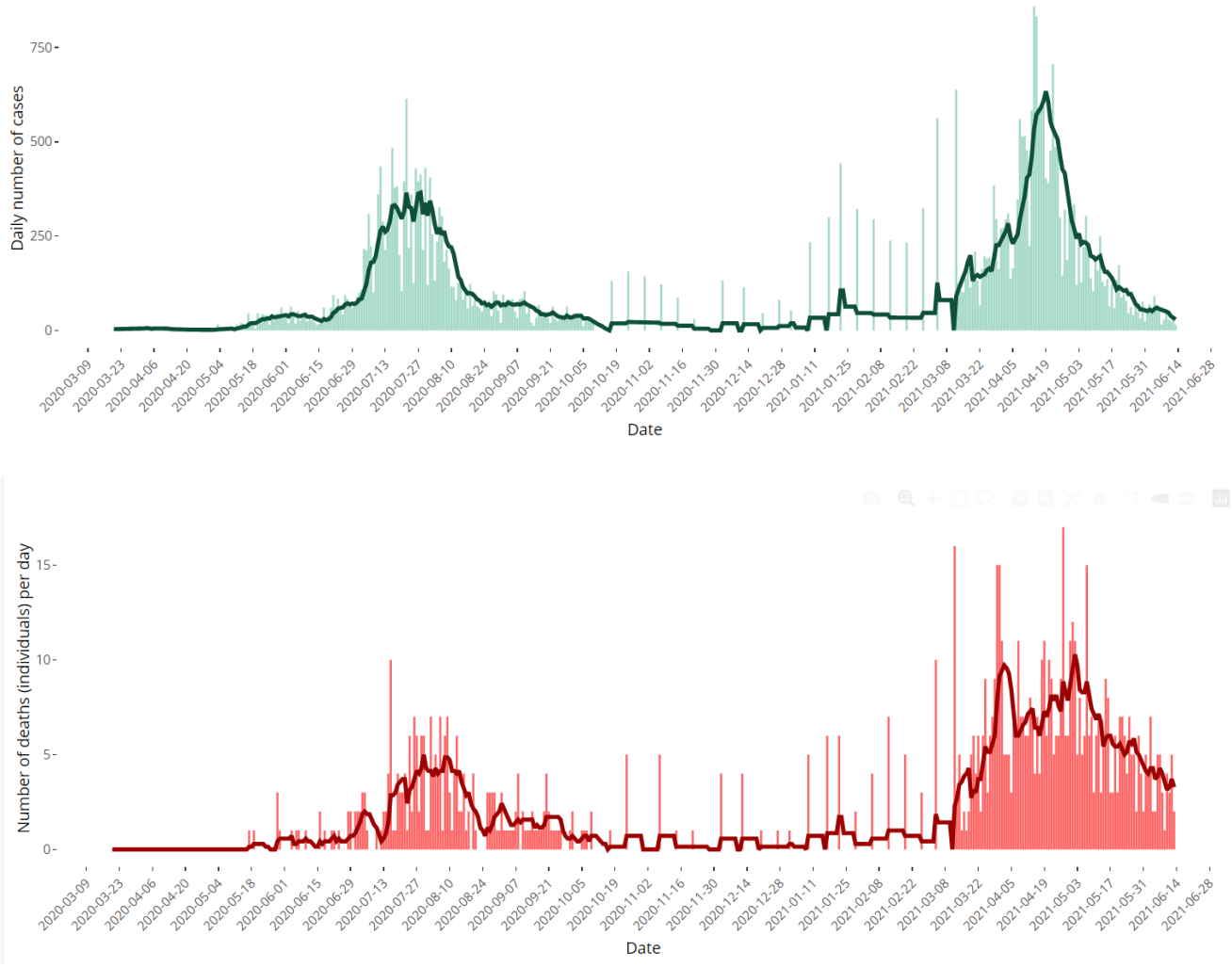
10. In the south of Madagascar, the consequences of the drought, compounded by the pandemic and insecurity in some areas, have exacerbated the humanitarian situation; with some 1.14 million people in the south of Madagascar now facing high levels of acute food insecurity, including nearly 14,000 people who are in "disaster" situations. The Humanitarian Country Team, of which the World Bank is a part, has contributed to the Government's priorities and accompanied the national response plan to the humanitarian situation in the south of Madagascar since January 2020.

11. The economic downturn due to the COVID-19 crisis, compounded by recurring natural disasters and chronic poverty, continues to threaten Madagascar's economic development and long-term stability. The impacts of the crisis could reverse past progress in poverty reduction and deepen fragility. Prior to the current crisis, Madagascar was one of the poorest countries in the world and lagged on human capital indicators. The coronavirus outbreak has intensified these challenges while pushing urban populations and notably women and youth, into positions of greater vulnerability due to strict confinement measures. Declining income per capita and rising inequality could sharpen the risk of social unrest, while the fiscal shock would also be heightened. Impacts of the current crisis on both poverty and stability could be compounded by further shocks, particularly from natural disasters.

B. Sectoral and Institutional Context

12. Madagascar declared a state of health emergency due to the global COVID-19 pandemic (decree 2020-359 of March 21, 2020), which was lifted on October 18, 2020. As of June 18, 2021, Madagascar reported 42,034 cases and 892 official deaths since the start of the outbreak. The first cases (three imported) were confirmed on March 20, 2020 and a first peak was reached in July/August 2020 (number of cases multiplied by four in a month), with the highest number of new cases per day at 360. While the capital city of Antananarivo was impacted the most, all 22 regions of the country were affected. The epidemiological situation worsened with the second wave with presence of the South-African variant, that hit Madagascar in March-April 2021, with over 600 new daily cases (and peak on April 14, 2021 with 854 new cases). The death rate (now estimated at 2.12 percent compared to 1.4 percent in 2020) has also increased.

Figure 1: Evolution of COVID-19 outbreak in Madagascar (number of new cases and deaths, per week) March 2020-May 2021 (as of June 13, 2021)



Source: *https://www.covid19mg.org/dashboard_fr.html*

13. Over the past decade, maternal, neonatal and infant mortality rates have improved but remain persistently high in Madagascar. Between 2008 (Demographic and Health Survey 2008-2009) and 2018 (Multi-Indicators Cluster Survey, (MICS) 2018), the maternal mortality rate fell from 498 to 426 deaths per 100,000 live births, a reduction of just over 14 percent. The neonatal mortality rate fell from 26 to 19 per 1,000 live births (27 percent) and the infant mortality rate also decreased from 48 to 40 per 1,000 live births (17 percent), during this period. Only 39 percent of deliveries occur within a health facility. The percentage of deliveries assisted by skilled medical professionals has not improved much over the last 10 years, rising from 43.9 percent in 2008 to 44.3 percent in 2012, and 46 percent in 2018. 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 mainly a preference for traditional births.

14. The COVID-19 outbreak has had an adverse impact on delivery and utilization of health services, particularly related to Reproductive, Maternal, Neonatal, Child and Adolescent Health and Nutrition (RMNCAH-N). Immediately following the first wave of COVID-19 from March to October 2020 in Madagascar, the World Bank carried out a follow-up analysis of essential health services during the COVID-19 pandemic[4]. Significant and persistent disruptions were observed for outpatient consultations, compared with previous trends and seasonality. Outpatient consultations fell significantly to 22 percent in August 2020, 15 percent in September 2020, and 8 percent in October 2020. Compared to expected levels, disruptions were particularly intense in April, May, and October 2020 for most indicators measuring essential health services. Slight changes were noted for family planning (2 percent) and antenatal care services (1 percent).

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. Immunization coverage rates are on the decline and outbreaks are on the rise. Complete immunization coverage for children 12 to 23-month old dropped drastically from 62 percent in 2008 to 33 percent in 2018. The drop in immunization coverage is driven by several factors, including the lack of off-grid refrigeration capacity (and maintenance thereof) and of qualified human resources, as well as the insufficient number of operational immunization outreach services. 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 planning and management of immunization activities fall within the framework of the Expanded Program on Immunization (EPI) Policy updated in 2009 by the Directorate of the EPI of the Ministry of Public Health (MoPH), and are integrated into the routine activities of all health facilities in the country as a component of primary health care.

16. COVID-19 had a significant impact on child immunization indicators. These indicators declined by 18-20 percent in April 2020, and 7-12 percent in October 2020. According to new findings released by the Global Financing Facility for Women, Children and Adolescents (GFF) (2020)[5], mathematical models indicate that large service disruptions in Madagascar have the potential to leave 424,000 children without oral antibiotics for pneumonia, 796,000 children without Diphtheria-Tetanus-Pertussis (DPT) vaccinations, 81,600 women without access to facility-based deliveries, and 645,100 fewer women receiving family planning services. As a result of disruptions in all essential services, child mortality in Madagascar could increase by 18 percent and maternal mortality by 12 percent over 2021.

17. Although the GoM has created legal and policy frameworks to advance gender equality, much remains to be done due to deeply rooted cultural norms and beliefs impacting health, education and livelihoods for women and girls. While women's socially ascribed roles consist of caring for the home, family members, health and education, they do not have authority over household spending and need their husband's approval. This also impacts women's ability to make decisions about reproductive health and family planning. Similarly, these norms may restrict women's access to vaccines as they need to seek husband's approval to access health services. In addition, gender norms that tolerate violence against women and girls contribute to high prevalence rates of gender-based violence (GBV) in the country. The prevalence of child, early, and forced marriage is high with 48 percent of women between 20 and 24 married by the age of 18 and 12.7 percent married before age of 15 (MICS 2018). Forty-one percent of ever-married women have experienced emotional, sexual, or physical violence by their partners or husbands during their lifetime. Women and girls are at increased risk of violence during the COVID-19 period. Income loss and limited mobility, compounded with existing gender role

[4] The analysis was conducted by a World Bank Development Economics (DEC)/GFF team.
[5] https://www.globalfinancingfacility.org/country-briefs-preserve-essential-health-services-during-covid-19-pandemic

expectations, may contribute to increases in intimate partner violence and other forms of GBV. A COVID-19 impact evaluation conducted by the United Nations Population Fund (UNFPA) showed an increase in domestic violence during the first wave in 2020, and the number of reported cases through the number 813 green line (domestic violence hotline) had increased five-fold by June 2020.

Madagascar's Response to COVID-19 and World Bank Support

18. The GoM declared a State of Emergency on March 21, 2020 closing schools, suspending events, limiting inter-regional traffic, closing borders, and limiting activity of private companies and public institutions. A multitask Operations Command Center led by the Ministry of Interior and Decentralization was also set up to coordinate the Government response. Measures to enhance resilience to shocks were and are being implemented through the preparation of a health security plan to respond effectively to future epidemics and progress toward the operationalization of the National Disaster Fund.

19. A costed emergency contingency plan for COVID-19 was prepared in February 2020 by the GoM with support from development partners (DPs). The World Bank responded swiftly to provide financial support to ensure a strong response to COVID-19 through its Contingent Emergency Response Component (CERC) Improving Nutrition Outcomes Project Using the Multiphase Programmatic Approach (*Projet d'Amélioration des Résultats Nutritionnels*-PARN, P160848) triggered on April 3, 2020 for US$20 million, which was replenished in June 2020 with an Additional Financing (P173950). The World Bank support and involvement was a catalyst to accelerate the country's preparedness and response.

20. Due to the increasing needs and financial gaps in the accelerating pandemic, the Government has developed a Multisectoral Social Emergency Plan, validated by the Council of Ministers on July 1, 2020. The World Bank has allocated US$169 million to support the Government's health, social, education, water and sanitation plans, and leveraged an additional US$123 million to finance the Multisectoral Emergency Plan through CERCs of other projects and further mitigate the pandemic's impacts on health, social protection and the private sector[6]. The additional financial support for health response was provided by the Madagascar World Bank portfolio CERC which was triggered on September 3, 2020 and added US$40 million in financing to the health sector. Main strategies as part of the health response include: (i) coordination; (ii) strengthening disease surveillance system, including at 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, oxygen therapy and Personal Protective Equipment (PPE)) and ensuring continuity of essential health services (such as immunization and safe deliveries); (v) logistical support to social activities (transfers of drugs and inputs, ambulances, waste management, and so on); and (vi) communication at all levels to prevent disease spread. In addition to the World Bank financing, other DPs are also contributing to finance interventions under this plan, such as the UN agencies (including UNICEF, WHO, UNFPA, UNDP), multilateral agencies (such as GAVI, the Vaccine Alliance and the Global Fund) and bilateral partners.

[6] The Madagascar World Bank portfolio CERC was triggered on September 3, 2020 and an additional US$123 million was leveraged to finance the urgent gaps in the Multisectoral Emergency Plan and prevent a further deterioration of the crisis. The proposed US$123 million helped fill part of the financing gap of the Multisectoral Emergency Plan, with a focus on health (US$40 million), social protection (US$45 million), private sector mitigation related measures (US$33 million) and sanitation activities in support of the Antananarivo Municipality (US$5 million). Through this activation of the IDA Immediate Response Mechanism / CERC in response to COVID-19, the CERC of the P154698 - Sustainable Landscape Management Project was triggered to finance the US$40 million of the additional health sector response.

21. This World Bank financial support was crucial for preparedness and response during the second wave: support for testing (US$12.8 million including eight GenExpert machines being procured; tests and laboratory reagents; contract with Pasteur Institute for testing and genomics analysis); drugs and key consumables to manage mild or severe cases (total amount US$6.8 million); strong support to oxygen therapy (technical assistance with UNICEF and maintenance of oxygen generators in main hospitals to ensure delivery of oxygen); PPE for health workers (more than 400,000 washable masks for community health workers; 395,000 filtering facepiece 2 masks and 165,000 surgical masks, and additional protective items such as gloves, protective suits, and so on) and key equipment (85 ambulances, 6 digital X-ray, 562 tablets).

22. The COVID-19 crisis overwhelmed an already overstretched health system. The COVID-19 crisis highlighted the need to urgently strengthen the national health system**.** Support under the proposed project will help build adequate capacities to deliver the COVID-19 vaccination campaigns. Pursuing investments to build a stronger and more resilient health system is essential to continuously assess and respond to the ongoing health crisis. Key support from the World Bank would be provided through the proposed US$150 million Pandemic Preparedness and Support to Basic Health Services Project (P174903), expected to be approved by the end of December 2021), that would complement this project.

23. Madagascar announced that it would vaccinate its population against COVID-19 (announced officially by the President of Madagascar on March 26, 2021) and joined the COVAX Facility on April 7, 2021, beginning vaccination on May 10, 2021. A first consignment of 250,000 doses of the AstraZeneca AZD1222 vaccine produced by the Serum Institute of India (SII) arrived on May 8, 2021 and COVID-19 vaccination was launched on May 10, 2021 (COVAX doses from Democratic Republic of Congo with an expiry date of June 17, 2021). As of June 19 (end of the campaign with available doses), 189,302 people have received a first dose. Approximately 9 percent of people vaccinated were health workers (16,720), 44 percent (83,323) were persons with comorbidities and the elderly (aged 60 or more) and the rest were other adults. Women represent 46 percent of the people vaccinated to date. Vaccination was currently available in all 22 regions and in 100 percent of health districts with 297 vaccination teams. However, subsequent consignments of AstraZeneca may be delayed due to the Government of India's restriction on vaccine exports from SII. The availability and terms of vaccines remain fluid and prevent the planning of a firm sequence of vaccine deployment, especially as the actual delivery of further vaccines is unlikely to be immediate. The proposed financing therefore enables a portfolio approach that will adjust during implementation in response to the evolving COVID-19 situation in Madagascar and the global market for vaccines.

24. In addition to those acquired through COVAX, Madagascar has expressed interest in acquiring more vaccines through the African Vaccine Acquisition Task Team (AVATT) convened by the African Union (AU). AVATT is engaged in discussion with the GoM to access additional vaccine doses through UNICEF that would contribute to the regional goal of taking the total population covered in Africa up to 60 percent, in countries that request for it. When firm contracts are in place between UNICEF, as the appointed procurement agent, and the manufacturers, UNICEF will conclude contracts with participating countries for the supply of the vaccines. These contracts will be reviewed by the World Bank to ensure that they comply with all operational policies and provide value for money in terms of both price and delivery times before financing from this grant can be disbursed to Madagascar upon its request.

25. The late decision to access COVAX put the country behind in the queue for large scale vaccine access. Support to build capacity for vaccine deployment is urgent as the epidemiological situation has worsened with the second wave triggered by importation of the B. 1.351 variant. During the second wave which peaked in April 2021, the health system was overwhelmed because of a lack of capacity to care for severe cases with oxygen

and insufficient health workers, plus disruption of other essential health services. Entering the winter season, a third wave is likely to occur around July-August, making rapid vaccination critical.

26. Building community trust and vaccine confidence are crucial to vaccine acceptance and the COVID-19 response. Madagascar has seen a large and recent increase in vaccine hesitancy. In a March 2021 survey conducted by UNICEF in collaboration with the MoPH, 30 percent of respondents expressed hesitancy around accepting a COVID-19 vaccine. The most common reasons for not wanting the vaccine are the beliefs that COVID-19 does not exist and/or that it poses no threat. More recent reports from the ongoing vaccination campaign indicate the hesitancy has further increased since the launch of vaccinations in Madagascar. Social media abounds with rumors that the initially imported 250,000 doses are either expired or otherwise ineffective and/or dangerous. Publicly displayed reluctance among prominent political figures to receive the vaccine compounds the recent rise in hesitancy.

27. As of June 19, 2021, at the end of the first vaccination campaign which lasted from May 10 to June 17, 2021, some key lessons are already emerging which required some adjustments to Madagascar's strategy during this first campaign and will help for the roll-out of next campaigns, especially on:

i. ***Targeting:*** while demand is still low and vaccine hesitancy high, targeted groups for this first campaign were expanded and outreach strategies increased with support from community health workers to vaccinate vulnerable people (elderly and in remote areas).

ii. ***Communication***: enhance communication about safety and efficacy of vaccines to limit fake news and mistrust, with support at several levels: community health workers, religious leaders and medicine professors.

National Capacity and COVID-19 Vaccination Plan

(i) Vaccine Readiness Assessment

28. The MoPH developed the NVDP without finalizing its Vaccine Readiness Assessment, to benefit from available vaccines without delay. The Vaccine Introduction Readiness Assessment Tool/Vaccine Readiness Assessment Framework (VIRAT/VRAF) was finalized on May 31, 2021. The assessment has shown that Madagascar has put in place most of the elements required for COVID-19 vaccine rollout. Nonetheless, key gaps remain and will need to be addressed, including through the proposed project. These gaps include strengthening national coordination, and surveillance systems, identification of target population groups, and strategic communication to address growing vaccine hesitancy. The VIRAT/VRAF assessment will be regularly updated as more information becomes available. The NVDP further details country needs and these gaps have also been identified in the second wave response plan developed by GoM, summarized in table 2 below. The project is designed to address those identified gaps.

Table 2: Summary of Vaccination Readiness Findings from the VIRAT/VRAF 2.0 Assessment[7]

Readiness domain	Readiness of government	Key gaps to address before deployment
Planning and coordination	The National Coordination Committee as well as a *Groupe Technique de Travail National* (GTTN-National Technical Working Group) to lead the operational aspects of vaccine introduction have been established. However, they are not fully functional. The program objectives have been defined and agreed by all key stakeholders. A COVID-19 vaccine procurement channel has been identified. GoM joined the COVAX facility on April 1, 2021 for procurement of COVID-19 vaccines. Additional vaccine doses will be procured through the AVATT of the Africa Union (AU) and other channels. The first phase of the vaccination campaign started on May 10, 2021. A NVDP has been developed by MoPH, with technical support from partners and based on WHO guidelines.	Gaps include adopting measures to ensure full functionality of the coordination committees and Technical Working Groups.
Budgeting	The budget for the COVID-19 vaccine program was developed, discussed with all stakeholders, and approved by MoPH. Budgeted micro-plans were developed and finalized which was key for the initiation of the vaccination program.	Gaps include (i) developing budget tracking capacity to be able to monitor COVID-19 program specific budget execution, (ii) overall capacity for budgeting and executing national immunization services.
Regulatory	All necessary regulatory frameworks are in place, including: - Emergency authorization procedures for new vaccines at country level on the basis of the WHO EUL - Regulatory procedures for the import of vaccines including special customs exonerations procedures and inspection procedures for fast processing. - Regulatory procedures for the import of supplies related to COVID-19 vaccines.	No gaps identified in assessment.
Prioritization, targeting, surveillance	Identification of target groups completed. Prioritization was informed by (i) the Strategic Advisory Group of Experts (SAGE) recommendations in terms of prioritization of vulnerable populations; (ii) recommendations from the Scientific Committee supporting the Government in the COVID-19 response; and (iii) local epidemiological data. Vaccination will follow a three-phase approach. Data on vaccine progress for phase 1 and adherence to priority groups is reviewed on a daily basis and shared with all relevant coordination committees.	Gaps include (i) Strengthening the capacity to identify and target the prioritized population groups. In particular, strengthening the ability to identify individuals' co-morbidities and other priority-relevant personal information; (ii) Strengthening information collection for further epidemiological planning and preparedness and (iii) Strengthening capacity for genomic sequencing for better surveillance.

[7] A multi-partner effort led by WHO and UNICEF developed the VIRAT to support countries in developing a roadmap to prepare for vaccine introduction and identify gaps to inform areas for potential support. Building upon the VIRAT, the World Bank developed the VRAF to help countries obtain granular information on gaps and associated costs and program financial resources for deployment of vaccines. To minimize burden and duplication, in November 2020, the VIRAT and VRAF tools were consolidated into one comprehensive framework, called VIRAT-VRAF 2.0.

Readiness domain	Readiness of government	Key gaps to address before deployment
Service delivery	Protocols for infection prevention and control measures have been updated. Protocols for the consent to vaccinations are currently being drafted. Currently, consent is only sought and given verbally. The COVID-19 vaccine distribution plan is available. Fixed sites and outreach sites are being readied for the mass vaccination efforts.	Gaps include (i) Support for establishing consent protocols; (ii) Support for the implementation of updated safety and infection prevention protocols; and (iii) Identify and support deployment of outreach vaccination sites.
Training and supervision	A training plan is available and training modules have been developed, using inputs from WHO. Initial training of trainers, supervisors and vaccinators took place for the first vaccination phase. Additional vaccinators are being hired. These will be health professionals from the public sector, the private sector, as well as sufficiently qualified medical school students.	Gaps include (i) Re-quantify personnel and training needs as the vaccination scales up; and (ii) Support for covering additional training needs.
Monitoring and evaluation	GoM's health information system is being extended to accommodate individual-level tracking of vaccinated persons. This will allow monitoring the progress of and coverage among the prioritized population groups, as well as individual follow-up. Currently, information about vaccinated individuals is collected at the level of the vaccination sites on paper-based tally sheets that are digitalized at the district level on a weekly basis and then sent to the regional level for further aggregation. A phone hotline with limited bandwidth is in place and is operational for feedback and grievances in relation to the ongoing vaccine effort. Measures for data protection, and appropriate data governance regulation are being put in place to monitor legitimate, appropriate and proportionate collection, use and processing of data by health information systems.	Gaps include (i) Strengthening security and data protection; (ii) Establishing a robust mechanism for feedback and grievances in relation to the vaccine program; (iii) Establishing an individual-level digital vaccine registry
Vaccine, cold chain, logistics, infrastructure	Terms of reference and standard operating procedures to coordinate COVID-19 vaccines and deployment of ancillary products are in place. A distribution strategy and plan for vaccines and ancillary products is available. Dry storage and cold chain capacity and infrastructure were assessed at all levels with associated costing for the cold chain equipment needs with the WHO sizing tool. The analysis revealed needs for vaccines requiring normal refrigeration (+2°C to +8°C) for an initial 17 percent coverage of the population. The current capacity is sufficient for the first phase doses (3 percent priority targets). Additional equipment should become available in August 2021 via the Cold Chain Equipment Optimization Platform. For the third phase of the immunization campaign an increase in cold chain capacity will be necessary. Stock management and monitoring tools were developed with support from WHO. The system management tool is used for stock monitoring at regional and central level. At vaccination sites, stock monitoring is currently paper-based.	Gaps include (i) lack of additional capacity in the national logistics working group for coordinating COVID-19 vaccine and ancillary products deployment; and (ii) strengthening of logistics, cold chain capacity and transportation capacity for vaccines and ancillary products; (iii) assessing energy needs and coverage (primary and back-up power, especially in cold chain), IT/communications (including internet connectivity) and water; (iv) strengthening and expanding stock management and distribution of vaccines and key supplies through the GoM's existing Vaccine Logistics Management and Information System (VLMIS); and (v) various aspects of waste management including support for the supervision and procurement of

Readiness domain	Readiness of government	Key gaps to address before deployment
	A revised national medical waste management plan is available as well as other documentations to ensure the security of health workers, patients, users and the community by reducing health and environmental risks. Standard operating procedures and guidelines for the collection and disposal of medical waste to the relevant stakeholders are in place.	materials.
Safety surveillance	Guidelines, documented procedures and tools for planning and conducting vaccine pharmacovigilance activities (that is, adverse events following immunization (AEFI) reporting, investigation, causality assessment, risk communication and response) are available. A limited number of trained staff to perform surveillance are operational. A technical committee for pharmacovigilance has been set up in accordance with the regulation texts and meets regularly to assess recent AEFI.	Gaps include overall capacity of the surveillance system, including (i) additional trained human resources; and (ii) data collection, management and analysis capacity.
Demand generation and communication	A national communication and social mobilization strategy for the introduction of the COVID-19 vaccine has been developed. The communication strategy pays special attention to the inclusion of women and vulnerable communities to reduce cultural and social barriers to the COVID-19 vaccination, as well as to inform about the benefits and risks of the vaccines. Given recent reports about rising hesitancy since the launch of COVID-19 vaccinations in Madagascar, a rapid crisis response communications plan has been developed, with adapted messages and materials for communication and advocacy. It remains consistent with the above strategy.	Gaps include: (i) further strengthening of communications and citizen engagement initiatives through data on beliefs, attitudes, rumors and narratives concerning the COVID-19 vaccines; (ii) addressing ongoing misinformation and disinformation campaigns, (iii) mobilizing public figures such as local and religious leaders for communication efforts; and (iv) capacity building/training for external affairs/public relations officers.

(ii) National Vaccination and Deployment Plan

29. The GoM approved an NVDP on April 30, 2021, as a basis for the receipt of the first COVAX shipment. The NVDP aims to provide guidance to the various stakeholders in the process of introducing COVID-19 vaccines in Madagascar. It was developed by members of the GTTN under the leadership of the Director General of Preventive Medicine, responsible for the technical coordination of the introduction of the vaccines in the country. More specifically: (i) the National Coordinating Committee, under MoPH leadership, provided strategic guidance, and (ii) the National Academy of Medicine of Madagascar, which serves as the Technical Advisory Group on Immunization, provided scientific guidance. The NVDP highlights the distribution platforms, including (i) storage and conservation, (ii) demand promotion to reach eligible populations by June 2023 with free and voluntary vaccines, (iii) monitoring and evaluation (M&E) mechanisms to capture complete, timely, and accurate COVID-19 data for evidence-based decision making, as well as tools and mechanisms for implementation management and pharmacovigilance, specifically vaccine safety monitoring, and (iv) AEFI management and injection safety.

30. The plan is divided into three phases to cover 50.5 percent of the population, targeting health workers from public and private sectors, elderly populations aged 70 and over, people with chronic conditions (diabetes and high blood pressure), and social workers and officials who are in direct contact with the population. These groups were determined through a national prioritization exercise, guided by the WHO SAGE Framework, and based on criteria of vulnerability to COVID-19 morbidity and mortality, and the need to ensure continuity of essential services. The plan seeks to vaccinate 14,209,024 people by the end of June 2023 through fixed (public and private health facilities), advanced and mobile (fokontany, retirement homes, and so on) vaccination sites. The plan includes measures to ensure a fair, equitable and inclusive access to vaccines for the target groups, including a system of pre-registration at the Fokontany level, and collaboration with health professional boards or the diabetes association. In rural and hard-to reach regions, community health workers will be used to sensitize the targeted population. And in the south of Madagascar, the population displaced by the humanitarian crisis will be particularly targeted. Allocation of vaccines by region will be done based on population, prevalence of cases and percentage of vulnerable populations.

Table 3: Priority Groups for Vaccination in Madagascar

	Population group	**Number of people**	**Percentage of population**
Phase 1	**3 percent of population**		
1	Health workers (including public, private, and non-profit, and community health workers (CHWs))	18,947	0.07%
2	Patients with co-morbidity	339,646	1.21%
3	Population over 70 years old	441,436	1.57%
4	Defense and security forces	23,250	0.08%
5	Social workers	20,821	0.07%
	Total phase 1	844,100	3%
Phase 2	**14 percent of population**		
1	Health workers (including public, private, and non-profit, and CHWs)	8,120	0.03%
2	Patients with co-morbidity	2,867,524	10.19%

	Population group	Number of people	Percentage of population
3	Population over 60-69 years old	852,851	3.03%
4	Defense and security forces	23,250	0.08%
5	Social workers	187,390	0.67%
	Total phase 2	3,939,135	14%
Phase 3	**33.5 percent of population**		
1	Population over 18 years old not reached during previous phases	9,425,788	33.5%
	Total	**14,209,024**	**50.5%**

31. The total cost of the NVDP is estimated at US$263.8 million, 80.43 percent of which is for the purchase of vaccines doses and consumables, 0.26 percent for cold chain strengthening, and 19.31 percent for operational costs. The estimated cost for the Phase 1 of vaccination of 844,100 individuals (three percent of the population representing the high-risk priority groups, assuming a two-dose vaccine) is US$2.08 million. For Phase 2 the vaccination of 14 percent of the population and representing the other high-risk groups (3,939,135 individuals), the cost is estimated at US$9.7 million. For the cost of vaccines and consumables for these two phases, 17 percent of the total population will be funded by COVAX. An additional three percent of population (totaling 20 percent) would also be covered by COVAX.

32. The World Bank's support will finance the following:

a) Deployment costs for Phases 1 and 2: COVAX will provide the vaccines free for these two phases, but not cover in country deployment costs (through its bridge funding, GAVI is financing the deployment of the initial 250,000 doses received).

b) Vaccines and deployment costs for 20 percent of the population under Phase 3: the GoM and partners will cover 10.5 percent of the population under Phase 3.

Table 4: National Vaccine Coverage and Acquisition Plan

Note: *The below figures are estimates as of June 21, 2021.*

Source of financing	Population targeted		Vaccines				Number of doses	Estimated total US$ (millions)	World Bank's VAC Status of the vaccine	Contract Status
	Percentage	Number	Source	Name	Price (US$/dose)	Shipping[8] (US$/dose)				
COVAX	20%	5,627,336	COVAX Facility	AstraZeneca	0	0	2	NA	WHO EUL + 1 SRA	Official request submitted to COVAX, confirmation received
World Bank (IDA) for vaccine acquisition and deployment (AZ)	10.0%	2,813,668	COVAX Facility	AstraZeneca	7	0.36	2	41,417,195	WHO EUL + 1 SRA	Official request submitted to COVAX, TBC
World Bank (IDA) for vaccine acquisition and deployment (J&J)	10.0%	2,813,668	AVATT	Johnson & Johnson	10	0.36	1	29,149,602	WHO EUL + 1 SRA	
Government and other partners (A&Z)	5.25%	1,477,176	COVAX Facility and direct purchasing	AstraZeneca	7	0.36	2	21,744,027	WHO EUL + 1 SRA	NA
Government and other partners (J&J)	5.25%	1,477,176	AVATT and direct purchasing	Johnson & Johnson	10	0.36	1	15,303,541	WHO EUL + 1 SRA	
Total:	50.50%	14,209,024						107,614,364.54		

[8] Costs associated with shipping only, does not include costs of deployment within country.

33. Strong collaboration between partners in support of the MoPH contributed to an effective response and swift preparation of the NVDP and was crucial for the campaign roll-out. Under the joint leadership of MoPH and WHO, regular exchange with all major DPs (multilateral, bilateral, international and local non-governmental organizations (NGOs)) helped bolster the MoPH in its COVID-19 response and in formulating the vaccination strategy. Key partners, including the World Bank, WHO, UNICEF, USAID, and France also contributed to strategic meetings between MoPH and COVAX.

34. Coordination mechanisms have been set up for monitoring of the vaccination campaign. Daily meetings are held with key stakeholders (MoPH, representatives of health districts and medical associations, key partners including the World Bank) and the wider GTTN weekly on campaign roll out.

35. For vaccine acquisition outside the COVAX Facility, Madagascar will have to enter into indemnification arrangements with manufacturers. The COVAX Facility has negotiated a form of indemnity on behalf of AMC participants, which was adopted by Madagascar as the basis for the receipt of its first COVAX shipment. In parallel, a compensation program for individuals in AMC countries to cover any serious adverse events arising from vaccines received through COVAX is being established. For vaccines acquired outside COVAX, Madagascar will need to establish the necessary indemnification frameworks per manufacturer agreements prior the acquisition. Box 2 summarizes issues of liability and indemnification in vaccine acquisition. Box 2 highlights support that the World Bank will provide through the project to ensure readiness for any vaccine procurement pursued outside COVAX.

Box 2: Liability and Indemnification Issues in Vaccine Acquisition

- The rapid development of vaccines increases **manufacturers' potential liability** for adverse effects following immunization.
- Manufacturers want to protect themselves from this risk by including **immunity** from suit and liability clauses, **indemnification** provisions, and other **limitation of liability** clauses in their supply contracts.
- **Contractual provisions and domestic legal frameworks** can all operate to allocate that risk among market participants, but **no mechanism will eliminate this risk entirely.**

For COVAX-financed vaccines:

- COVAX has negotiated model indemnification provisions with manufacturers for vaccines purchased and supplied under the COVAX AMC.
- In providing vaccines through COVAX AMC, COVAX requests COVAX AMC participants to have in place an indemnity agreement directly with manufacturers, and the necessary indemnity and liability frameworks for that purpose either in the form of the COVAX model indemnification arrangements or prior bilateral arrangements with manufacturers.
- The COVAX Facility will have a no-fault compensation scheme for AMC countries as part of its risk mitigation strategy. This will cover vaccines supplied only through COVAX AMC.
- Madagascar will have to consider what it will take to implement these indemnification provisions (including statutory implementation) and how they can avail of the benefits of the no-fault compensation scheme.

For vaccines purchased outside of COVAX:

- Madagascar will need to enter direct indemnification arrangements with manufacturers.
- Madagascar does not currently have legislation in place to provide statutory immunity for manufacturers, and has no national no fault compensation scheme.
- Adoption of any such indemnification provisions or compensation scheme would have to be in accordance with Madagascar's own national strategy and framework.

Possible World Bank support to Madagascar, depending on needs elaborated over the course of preparation, may include:

- Information sharing on (i) statutory frameworks in Organisation for Economic Co-operation and Development countries and other developing countries; and (ii) overall experience in other countries
- Provide training and workshops for government officials to familiarize them with the issues.;
- For World Bank-financed contracts, provision of Hands on Expanded Implementation Support

The project operational documents (Vaccine Delivery and Distribution Manual/Project Implementation Manual VDDM/PIM) will make clear that the country's regulatory authority is responsible for its own assessment of the project COVID-19 vaccines' safety and efficacy, and is solely responsible for the authorization and deployment of the vaccines in the country.

C. Relevance to Higher Level Objectives

36. The proposed project is being processed under the World Bank Policy for Investment Project Financing (IPF), paragraph 12: Projects in Situations of Urgent Need of Assistance or Capacity Constraints due to fragility, natural disaster and capacity constraints.

37. The project is aligned with the objectives of the World Bank Group's 2017-2021 CPF for Madagascar (Report no. 114744-MG), and with the GoM's development plan, the "Initiative Emergence Madagascar". Overall, the CPF seeks to increase the resilience of the most vulnerable people and to promote inclusive growth, while strengthening national and local institutions to reduce fragility. With an unprecedented health, economic and social crisis due to COVID-19, the CPF has been adjusted to respond to the COVID-19 crisis. The project is therefore framed within the first focus of the CPF: crisis response and building resilience which will include investing in human capital, disaster recovery and disaster risk management.

Adjustments to the country program in response to the COVID-19 crisis

38. The World Bank has adjusted its CPF in response to COVID-19. The pandemic had a significant impact on Madagascar's development financing needs over the next two years requiring adjustments to the WBG country program (detailed in annex 4).

39. The World Bank support under the Relief Phase has required an additional US$351.76 million in IDA and non-IDA financing that was not anticipated under the CPF in FY21. In addition to the COVID-19 Response Development Policy Operation (DPO, P174388, US$75 million, approved on August 27, 2020[9]), the World Bank financed a US$1.76 million AF to the PARN (P174669[10]), a US$15 million AF to the Madagascar Basic Education Support Project/Emergency Project of the Global Partnership for Education (GPE) (P160442[11]) and proposes to finance the US$100 million Support to COVID-19 Vaccine Purchase and Health System Strengthening Project (P176841), all are interventions that were not envisaged in the CPF. This phase of the response mobilizes resources from within the portfolio through activation of CERC and restructuring and scaling up of existing programs. The World Bank has allocated US$169 million to support

[9] Report No. PGD221
[10] Approved October 22, 2020, Report No. PAD4094
[11] Report No. PAD2438

the Government's health, social, education, water and sanitation plans, and leveraged an additional US$123 million to finance the Multisectoral Emergency Plan through other CERCs. Support to the agricultural sector, including the rice sub-sector, will be provided through an IPF which will finance measures to increase agricultural productivity and food security. Most project resources reallocated and mobilized for pandemic response through activation of CERCs have been replenished through AF operations during FY21. The Least-Cost Electricity Access Development Project (LEAD; P163870[12]) will support the electrification of approximately 500 of the 1,250 public health centers that remain unelectrified. The lack of well-equipped rural health centers is a major challenge for public health in Madagascar. It disproportionally affects rural areas, the poor, and female-headed households. By electrifying 40 percent of unelectrified primary health care facilities across the country, mostly through off-grid technologies, the project will directly contribute to increasing the types and quality of health services available to the most vulnerable parts of the population. The project will enable lighting, refrigeration, sterilization, and other services that can significantly improve the quality of rural health care provision. The first phase with 50 health centers is ongoing and works are expected to be completed by the end of 2021. This is further detailed in annex 4.

40. The Restructuring Phase is supported by new activities in education, pandemic preparedness, urban and rural resilience, and digitalization. The GPE is providing an additional US$32 million AF to the Basic Education Support Project (P160442[13]) to ensure educational continuity at home during the pandemic-induced confinement period, prepare for reopening of post-containment classes and strengthen the resilience of the system in the face of shocks, including natural disasters or health crisis. A Pandemic Preparedness and Basic Health Services Delivery Project (P174903) (US$150 million including US$17 million from the GFF), would support government's efforts to implement the recommendations of a recent assessment of the country's global health security systems and further reinforce the country's capacity to respond to future pandemics of COVID-19 magnitude. The new Resilient Livelihoods in the South of Madagascar Project (MIONJO) (P171056[14]) (US$100 million) notably seeks to improve access to basic infrastructure and safe water, support livelihood opportunities and strengthen local governance in southern Madagascar with a primary focus on youth and women. The COVID-19 crisis has strengthened the role of Water, Sanitation and Hygiene (WASH) services to prevent the spread of diseases and support livelihoods. Building on a strong track record in social protection, a social protection project has been brought forward from FY23 (AF COVID response under Madagascar Social Safety Net Project, P174886[15]) to help build resilience to future shocks. These three new operations responding to the pandemic were not envisioned in the CPF program. An AF to the Integrated Urban Development and Resilience Project (P175087[16]) (US$50 million), will enhance urban living conditions and flood resilience in selected low-income neighborhoods of Greater Antananarivo; and to improve the Recipient's capacity. The Digital Governance and Identification Management System Project (PRODIGY) (P169413[17]) (US$140 million) is a CPF operation that was adjusted to new circumstances. Altogether, this Phase of the response adds US$300 million in financing that was not anticipated in the CPF while US$345 million is as planned in the CPF.

[12] Approved March 1, 2019, Report No. PAD2635.
[13] Report No. PAD2438.
[14] Approved December 10, 2020, Report No. PAD3647.
[15] Approved February 19, 2021, Report No. PAD4175.
[16] Approved December 10, 2020, Report No. PAD4135.
[17] Approved September 29, 2020, Report No. PAD3789.

41. The Resilient Recovery Stage is geared towards reinforcing infrastructure and private sector development. Of the US$1.1 billion in IDA financing earmarked towards the recovery phase, US$1 billion are operations that will be delivered as planned with adjustment in design to increase resilience and take advantage of new opportunities to ensure a more sustainable, inclusive and resilient future in a world transformed by the pandemic. In addition, the AF to the Madagascar Integrated Growth Poles and Corridor SOP-2 Project (P175172[18]) (US$33 million), is part of a strongly complementary approach whereby the ongoing Madagascar Integrated Growth Poles and Corridor SOP-2 Project (P164536[19]) is being restructured to scale-up immediate support to the private sector during the COVID-19 crisis, with additional funds from the portfolio-level CERC. The proposed Economic Transformation for Inclusive Growth Project (P174241) (US$150 million) will provide significant support for the subsequent economic recovery, with an expanded sector and geographical coverage, and a focus on economic transformation including through digital entrepreneurship. Infrastructure related projects, a key pillar of the economic recovery, have been postponed until FY22 to accommodate the program changes outlined above.

42. In line with the WBG COVID-19 Crisis Response Approach Paper from June 2020, resources have been realigned to support priority actions around the following four pillars (i) saving lives, (ii) protecting poor and vulnerable people, (iii) ensuring sustainable business growth and job creation, and (iv) strengthening policies, institutions and investments for rebuilding.

43. Program adjustments include: i) reallocation of portfolio resources through activation of CERC and restructuring and reallocations of existing programs; ii) developing new operations responding to the pandemic that were not envisioned in the original CPF program (for example, pandemics preparedness program); and, iii) reprioritization of the CPF pipeline to advance operations that were planned for later years (from FY22/23 to FY21) while delaying selected new operations in infrastructure.

III. PROJECT DESCRIPTION

A. Development Objectives

The project objectives are aligned to the results chain of the COVID-19 SPRP.

Project Development Objective: This project's development objective is to support the Government of Madagascar to acquire and deploy COVID-19 vaccines, and to strengthen its immunization services.

PDO level indicators:

- Percentage of the population fully vaccinated, based on prioritized populations as defined in national plan, by gender.

Intermediate indicators:

- Number of complete doses of eligible COVID-19 vaccine purchased through the project that arrived in the country.
- Number of sites with functioning refrigerators purchased through the project.
- Number of health workers trained in vaccine administration within the project, by gender.

[18] Approved December 10, 2020, Report No. PAD4150.
[19] Approved September 18, 2018, Report No. PAD2703.

- Number of vaccination sites that received waste treatment equipment through the project.
- Proportion of severe adverse events following immunization (AEFI) reported and investigated based on national guidelines.
- Percentage of frontline healthcare workers with the knowledge to recognize, medically manage, and refer GBV survivors to appropriate services.
- Percentage of immunization sites reporting data on time.
- Percentage of recorded grievances that are addressed in a timely manner.

B. Project Components

44. Under Phase 1 and 2 of the NVDP, the project will support deployment costs for the vaccines provided by COVAX (20 percent of population's need) and under Phase 3, vaccine acquisition and deployment costs to cover 20 percent of Madagascar's population (with approved vaccines, for now Madagascar has identified two types of vaccines: AstraZeneca and Johnson & Johnson), while also strengthening the country's immunization system. Table 4 provides a summary of National Vaccine Coverage and Acquisition Plan and table 5 details project costs and World Bank financing. The proposed closing date of the project is June 30, 2024 and it is expected that disbursements will be frontloaded for vaccines during the first one-and-a-half to two years of the project.

Table 5: Project Cost and Financing

Project Components	IDA Financing (US$ million)
Component 1: Acquisition of Project COVID-19 vaccines and medical supplies	**71.0**
Component 2: Strengthening health system for effective deployment of Project COVID-19 Vaccines	**29.0**
Sub-component 2.1: Strengthening logistics, cold chain and vaccination sites	14.6
Sub-component 2.2: Strengthening surveillance and information systems	3.2
Sub-component 2.3: Strengthening capacity for managing and implementing immunization campaigns	5.7
Sub-component 2.4: Strengthening communication and addressing vaccine hesitancy	3.
Sub-component 2.5: Project Implementation and Monitoring	2.5
Component 3: Contingent Emergency Response	**0**
Total Cost	**100.0**

Component 1: Acquisition of Project COVID-19 Vaccines and medical supplies (US$71 million equivalent)

45. In alignment with the revised VAC, the World Bank will provide up to US$71 million to finance vaccine acquisition. The acquisition is expected to be implemented through the AVATT and COVAX purchasing mechanisms. The vaccines expected to be acquired are the AstraZeneca and Johnson & Johnson[20], but depending on the available international supply, other approved vaccines may be procured through the

[20] AZD1222 (also known as ChAdOx1_nCoV19/ commercialized as COVISHIELD in India) - AstraZeneca/Oxford; Ad26.COV2.S - Johnson & Johnson.

project. The project will fully immunize around 5.6 million people (about 20 percent of Madagascar's population of 28.1 million). These acquisitions will be complemented by other sources, as detailed in table 4, to reach the Government's current coverage target of 50.5 percent of the population by June 2023. This percentage corresponds to the entire adult population of Madagascar. This financial support is aligned with the NVDP. In addition to vaccines, this component will finance vaccination supplies needed for vaccine delivery and distribution. These supplies include cotton swabs, needles, syringes, and so on.

Component 2: Strengthening health system for the effective deployment of Project COVID-19 Vaccines (US$29 million equivalent)

46. This component will support the deployment of vaccines and key investments in the health system which are essential to ensure effective delivery of COVID-19 vaccines and strengthening the health system in the long-term.

Sub-component 2.1: Strengthening logistics, cold chain and vaccination sites (US$14.6 million equivalent)

47. Strengthening logistics and cold chain. The current vaccine logistics system and cold chain have critical weaknesses[21]. The project will alleviate some of the constraints by providing support at all levels of the system. This includes operationalizing the distribution strategy, identifying needs in cold chain equipment and appropriately strengthening the cold storage infrastructure, and strengthening the existing GoMs system for tracking and monitoring the distribution of vaccines (VLMIS)–all coordinated by the national vaccine logistics working group. Strengthening transport and tracking systems will entail the procurement (and maintenance) of vehicles for vaccine transportation and supervision. Strengthening the cold chain will entail the procurement of solar direct drive refrigerators and refrigerators using low Global Warming Potential refrigerants. The latter is being done in close coordination with similar initiatives, such as the ongoing World Bank LEAD project.

48. This sub-component will support COVID-19 vaccine transportation mechanisms, from collection at the port of entry and deployment to vaccination sites and administration of the vaccines. These operational costs will cover deployment of vaccines provided by COVAX (20 percent coverage of the population) and those directly procured by the project (covering an additional 20 percent of the population), totaling 40 percent of Madagascar's population. This will also involve the temporary recruitment of health workers for the acute phase of deployment, per diems for all staff involved in conducting the campaign (health workers doing counselling and administering the vaccine, people ensuring registration) and the use of mobile outreach services to expand vaccination efforts.

49. Supporting vaccination centers and points of delivery. Based on the experience with the ongoing deployment of the initially received 250,000 doses, the MoPH has identified that health facilities are not sufficient and not sufficiently prepared for the vaccination of adult population groups. The project will support the establishment of vaccination centers (vaccinodromes) through the procurement of tents, tables, chairs and beds and support their deployment across the country. These vaccination centers will

[21] Maya M.V.X. van den Ent, Andre Yameogo, Eric Ribaira, Celina M. Hanson, Ramiandrasoa Ratoto, Saholy Rasolomanana, Chrysanthus Foncha, François Gasse. Equity and immunization supply chain in Madagascar. Vaccine, Volume 35, Issue 17, 2017, Pages 2148-2154.

complement the hospitals and primary health care facilities that now are already providing COVID vaccination services, allowing in particular integration with RMNCAH-N services for women.

50. Targeting strategies to remove barriers to women's access to vaccination. This will include: (i) support to community-level vaccination points that target women (ii) inclusion of women who work in informal sectors and as community health workers into applicable priority groups; (iii) provision of vaccines and accurate COVID-19 vaccine information as part of ante-natal care and reproductive health services (and other RMNCAH-N) targeting women; and (iv) mobile brigades for hard-to-reach and vulnerable populations, including people living with disabilities.

Sub-component 2.2: Strengthening surveillance and information systems (US$3.2 million equivalent)

51. Vaccine safety and surveillance. This project constitutes an opportunity to strengthen the existing monitoring system for AEFI. This includes the designation of expert groups trained to review vaccine safety data and flag serious AEFI as well as identifying potential clusters of AEFI, should they occur. The project will also support the establishment of appropriate policies and structures for the indemnification and compensation of individuals who suffer from AEFI.

52. Strengthening Madagascar's capacity for genomic sequencing will allow for better surveillance and epidemiological decision making based on the present and future COVID-19 variants. The genomic sequencing will be essential to map the spread of current and future variants of concern, and to implement an effective vaccine response. Vaccination monitoring systems will be strengthened to apply to other vaccine-preventable diseases, including those induced by climate shocks. Madagascar currently has only one next-generation sequencing (NGS) machine. Substantial investments are needed for establishing sequencing capacity, as well as for ancillary equipment for laboratory preparation and quality control. A wide range of experts would also be needed to support genomic surveillance, including molecular biologists, bioinformaticians, and molecular epidemiologists for data analysis and interpretation, field epidemiologists, disease specialists for interpretation of the data generated, and public health specialists for adoption of the results into policy. Efforts under this activity will explore regional solutions such as through the Africa CDC network of laboratories, precisely due to the high capacity requirement of sequencing and the proposed pandemic preparedness and support to basic health services project under preparation would better enable larger scale investments.

53. Information systems supporting the roll-out of vaccines. The project will strengthen information systems to support data quality and data infrastructure to: (i) improve the distribution of vaccines to end-users, (ii) prevent elite capture; and (iii) help identify false and sub-standard products. Strengthening of the vaccine logistics information system will facilitate the tracking vaccine distribution from their port of entry to the vaccination sites. Individual level immunization tracking will allow for digital vaccine certification (supplemented by paper-based systems) and help reduce elite capture of vaccines. The project will strengthen the MoPH's ability to collect quality data from frontline health facilities and their use of this data in decision making. This investment will be done in close collaboration with the departments of disease surveillance (*Direction de la Veille Sanitaire, de la Surveillance Epidémiologique et Riposte*) and planification (*Direction des Etudes, de la Planification et du Système d'Information*). This sub-component will require the procurement of a limited number of data entry devices to be used at vaccination sites[22], airtime (data credit) for data syncing, and the recruitment and deployment of additional personnel.

[22] This acquisition will occur in close coordination with the World Bank digitalization project (Digital Governance and Identification Management System Project- PRODIGY (P169413)).

Sub-component 2.3: Strengthening capacity for managing and implementing immunization campaigns (US$5.7 million equivalent)

54. Strengthen capacities for planning and coordination and for safe and efficient COVID-19 vaccine administration. The project will strengthen capacities of key administrative personnel at national and regional levels, in the following areas: planning, budgeting, and procurement, vaccine distribution from central level to the point of administration, quality control, regulation of vaccine safety and indemnification systems, and communications with the public. A climate vulnerability assessment and climate-sensitive planning to prepare for vaccination during potential climate shocks, as well as route optimization to reduce fuel use, will be conducted.

55. The project will also support the training of new and existing vaccinators and front-line health personnel. Trainings will include modules on vaccine management, conservation, safe injection, interpersonal communication, community engagement, detection and notification of adverse events post injection, protocols for conducting vaccination campaigns during climate shocks and reporting on vaccination activities. Importantly, the training will also include a GBV module to give health workers the competencies to prevent, identify, manage and refer possible cases of GBV. Through this GBV training, the project will contribute to support promotion of awareness and use of GBV services, including the expanded network of integrated service centers at health facilities that offer medical, legal, psychosocial support and referrals. PPE for the vaccination teams is also included under this sub-component and is complementary to contributions by other development partners.

56. Bio-medical waste procedures and management. This project will also invest in and optimize plans and processes for collection and transportation of COVID-19 and other related medical waste to disposal sites. The project will additionally develop and implement guidelines and staff training to improve climate friendly medical waste management at the facility level with a focus on waste management in flood prone areas. Key waste management inputs will also be procured through the project (bags to collect waste, bins).

Sub-component 2.4: Strengthening communication and addressing vaccine hesitancy (US$3 million equivalent)

57. To address vaccine hesitancy, this sub-component will implement a national risk-communication plan to ensure community participation in COVID-19 vaccination efforts and accountability mechanisms. This project will capitalize on previous undertakings with the plague and measles epidemics by the GoM and use the existing network of community health workers and non-governmental organizations (including women and youth-led civil society organizations). It will particularly draw on local leaders and heads of religious communities to inform the public about the risks and benefits of immunization. To inform and adapt the communication campaign with on-time evidence, social media monitoring will be strengthened and high-frequency analysis of beliefs and attitudes will complement existing phone survey instruments. for. Confidence in vaccines for other diseases, including climate-induced, outbreak prone diseases will also be incorporated in communication efforts. The World Bank and the government could also consider ways to capitalize on existing World Bank-funded projects to support

the rollout of immunization and simultaneously communicate options for accessing the vaccine to these vulnerable families as well as food or other services. Project structures for household cash transfers and support to improve access to water for affected families in southern Madagascar could be used to provide information about the vaccine as well as health and nutrition services.

58. The health promotion interventions will be tailored to the needs of vulnerable and hard-to-reach groups and designed to be easily understood by all. The vulnerable and hard-to-reach population groups, include certain groups of women and girls, and disadvantaged populations – for example, illiterate persons or those with a very limited access to health/COVID-19-related information. Building "vaccine literacy" for the COVID-19 vaccine is an opportunity to boost confidence in vaccinations more generally, contributing to greater utilization and retention in the childhood EPI program.

59. The communication campaign and behavioral change interventions will be empirically driven and gender-sensitive. To monitor perceptions and behavioral change interventions, financing will include beneficiary research on vaccine hesitancy, barrier to service access, and levels of vaccine uptake and the equity of vaccine distribution. In addition to the existing phone survey platform in collaboration with World Bank Poverty and Equity Global Practice this project will support (i) social media sweeps; and (ii) high-frequency, low-cost behavioral surveys in collaboration with the World Bank's behavioral economics team; and regular polling of vaccine hesitancy.

60. Applying a gender perspective to the research, the project will address women's limited access to information compared to male peers, opposition to vaccination in male-headed households, and the stigma facing predominantly female vaccinators. Multiple outreach media will be used, including messaging through radio, television, and community-based platforms in French and Malagasy. Providers will also be trained to provide women with accurate COVID-19 vaccine information as part of ante-natal care and reproductive health services (and other RMNCAH-N).

Sub-component 2.5: Project Implementation and Monitoring (US$2.5 million equivalent)

61. ***Project implementation support.*** This sub-component will strengthen the existing Project Coordination Unit (PCU)[23], recruiting additional staff and covering operating costs, necessary training and equipment, support for procurement, financial management, environmental and social risk and impact management, and M&E and reporting activities. The PCU will support national M&E frameworks for vaccine deployment at national and subnational levels to align with epidemiological shifts, with timely recording and reporting of performance benchmarks. This will include: (i) collection of data from ministries and other implementation agencies; (ii) compilation of data into progress reports; (iii) carrying out of surveys; and (iv) carrying out of annual expenditure reviews. The project's climate activities will also be monitored.

Component 3: Contingent Emergency Response.

62. This component will facilitate access to rapid financing by allowing for the reallocation of uncommitted project funds in the event of a natural disaster, either by a formal declaration of a national emergency or upon a formal request from the Government. Following an eligible crisis or emergency, the

[23] The PCU currently implements several projects funded by the World Bank and other development partners. These projects include the PARN (P160848) and its CERC used for COVID-19 response.

Government may request that the World Bank reallocate project funds to support emergency response and reconstruction. This component would draw upon uncommitted resources from other project components to cover emergency response. A CERC Manual and an Emergency Action Plan, acceptable to the World Bank, will be prepared and constitute a disbursement condition for this component.

63. Retroactive Financing: An option of retroactive financing will be made available to the project covering up to 20 percent of the financing allocation for eligible expenditures incurred from April 30, 2021 up to the signing of the financing agreement. This would help to retroactively finance COVID-19 vaccines and ancillary supplies as needed/requested by the GoM.

Table 6: Summary of COVID-19 Vaccine Sourcing and World Bank Financing

National plan target (population %)	Source of vaccine financing and population coverage				Specific vaccines and sourcing plans	Doses purchased with World Bank financing (2 doses assumed)	Estimated allocation of World Bank financing
	COVAX grant	World Bank-financed		Other*			
		Through COVAX	Through direct purchase				
Phase 1: 3%	3%				Predominantly AstraZeneca through COVAX	0	**Purchase**: US$71 million **Deployment**: US$26.5 million **Other**: US$2.5 million (Project implementation and monitoring)
Phase 2: 14%	14%				Predominantly AstraZeneca through COVAX	0	
Phase 3: 33.5%	3%	10%	10%	10.5%	**World Bank-financed:** Combination of AstraZeneca and Johnson & Johnson through COVAX **Non-World Bank-financed:** Additional doses through COVAX, AVATT, bilateral agreements and direct purchase.	8,441,004	

*Other: Includes coverage financed by the government, bilaterally, from other MDBs, and so on.

64. Proposed interventions of the project are also complementary to other projects (active or pipeline) of the Madagascar portfolio, as detailed in the table below:

Table 7: Madagascar World Bank portfolio linkages to the proposed project

World Bank Project	Financing amount (US$ million)	PDO	Vaccine complementarity
Prodigy (P169413) Active	140	To strengthen the Identity Management system and government capacity to deliver services in selected sectors.	Overall digital support, including to equip community health workers and health facilities with data input devices.
Pandemic preparedness and support to basic health services (P174903) Pipeline, to be approved Q2 FY22	150	To strengthen national cross-sectoral capacity for collaborative disease surveillance and epidemic preparedness and increase utilization of basic health services ; and in the event of an eligible crisis or emergency, to provide immediate and effective response to said eligible crisis or emergency	Strengthening multisectoral capacities for pandemic preparedness and response, especially on surveillance and system strengthening, laboratory capacities.
CERC under the Sustainable Landscape Management Project (P154698) Active	40 (only CERC)		US$40 million allocated for emergency COVID-19 health response by providing PPE, key equipment, drugs and tests as well as oxygen therapy.
PARN (P160848), including CERC Active	100 (including US$20 million for CERC)	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.
Least-Cost Electricity Access Development Project - LEAD (P163870) Active	150	To increase access to electricity services for households, enterprises, and health facilities in Madagascar.	Support electrification of health facilities in Madagascar.
Investing in Human Capital DPF II (P171460) Pipeline, to be approved Q1 FY22	100	To support the GoM's efforts to prioritize and sustain effective human capital development through two pillars: (i) more and better social services for under-served households and improved protection for women and children and (ii) more transparent and predictable investments in human capital.	Changes to flow of financing for primary health care facilities and medium- to long term effects on nurse and midwife capacity

C. Project Beneficiaries

65. The direct project beneficiaries will be the 11.3 million people who will be vaccinated against COVID-19 (about 40 percent of the total Malagasy population of about 28.1 million people). Indirectly, the whole

population of 28.1 million people is expected to benefit from the project, due to the vaccine roll-out and higher immunization rates, which will lead to reduced community transmission, which will in turn translate into less overstretch of public service (including essential health services) and the ability to safely engage in economic activities requiring physical proximity.

IV. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

66. The MoPH will be the primary implementing agency for this project. The existing PCU in the MoPH (*Unité de Coordination de Projets*), which supports the management of the PARN and its CERC, used for COVID-19 response in the health sector, but also financing from other partners (GAVI and Global Fund) will be expanded to cover fiduciary and safeguards management for the project, and coordination with key MoPH departments. The PCU capacity will be enhanced through: (i) a dedicated focal point for the proposed project; (ii) additional fiduciary staff including: a procurement officer, a senior accountant and an accountant; (iii) an environmental and social safeguards specialist and a social mobilization and communication specialist; (iv) an M&E specialist; and (v) other technical specialists as required (including potentially for public health, planning, logistics and communications, the regulatory authority, the directorate of pharmaceuticals). The PCU will prepare the work plan and annual budget (WPAB) which will be cleared by the Steering Committee of the project.

67. A Project Steering Committee (PSC) will be set up within one month of the project's effectiveness date, chaired by the MoPH and with representatives of Ministry of Economy and Finance, other relevant Ministries and representatives of civil society organizations. The PSC will meet at least once a year to review progress reports from the project and validate the WPAB. It will be responsible for the provision of strategic guidance, general oversight of the project and support for its effective implementation. The GTTN will provide day-to-day technical and strategic guidance for the implementation of project activities.

68. At regional and district levels, the regional health directions and district health teams will implement project activities under their responsibilities, with dedicated focal points for the immunization campaigns.

69. No military forces will be used for activities implemented under the proposed project. Military doctors and nurses are providing vaccines to military forces in military health facilities.

70. The project will be implemented in accordance to with the PIM, which will include a VDDM manual. The PIM will include a detailed description of (i) the institutional and implementation arrangements of the Project; (ii) administrative, accounting, auditing, reporting, financial management, procurement and disbursement procedures; (iii) environmental and social obligations and arrangements; (iv) rules and procedures for personal data collection and processing in accordance with applicable national law and good international practice; (v) indicators to be used in the monitoring and evaluation and procedures for Project monitoring, supervision and evaluation, including the format and content of the Project Reports; (vi) the requirements of the Anti-Corruption Guidelines; and (vii) other technical, administrative, fiduciary or coordination arrangements. The VDDM manual would specify rules and procedures for (i) prioritizing intra-country vaccine allocation; (ii) rules and procedures establishing minimum standards for vaccine management and monitoring; (iii) processing and collection of personal data in accordance with national law on Personal Data Protection and good international practice; (iv) vaccine distribution plan, including action plan setting out timeline and steps for immunization; and (v) criteria for the procurement (whether

via advance purchase mechanisms, direct procurement or through the COVAX Facility), importation, storage and deployment of vaccines.

Table 8: Potential Supportive Roles for Partner Agencies in Implementation

Organisation	Support areas and activities	Contribution (where known)
COVAX/GAVI	The COVAX AMC is expected to provide vaccines to cover 17 percent of the population. In addition, COVAX is providing financing to UN and international NGOs for technical assistance and cold chain improvements.	Amount in addition to procurement of vaccines for 20 percent of population is TBC. US$533,106 for deployment of initial 250,000 doses.
AVATT	GoM in contact with AVATT, discussed official application to AVATT in the council of ministers' meeting held on May 6,2021 and is, in principle, planning to join the initiative.	TBC, potentially financing for the acquisition and deployment of 400,000 vaccine doses
WHO	WHO is supporting the GoM in the form of technical support to the national technical advisory group on immunization (GTCV) under the national academy of medicine, to inform COVID-19 vaccination policy, strategy, planning and monitoring, vaccine safety, capacity building, surveillance and advising on vaccine pharmacovigilance more generally.	TBC
UNICEF	UNICEF is supporting the development and implementation of national plan for vaccine deployment including support for the quantification and forecasting of supply needs, support to procure and install quality cold chain equipment at national and regional level, communication and mobilization and strategies for improved integration of COVID-19 vaccine deployment with routine EPI and other primary health care services.	TBC
Global Fund	The GoM has submitted a request under Accelerated C19RM for the procurement of PPE, COVID-19 testing and treatment.	US$6,832,072
AU-Africa CDC	The partnership with AU-Africa CDC will be important for some of the components related to information systems and genomic surveillance. The government should leverage harmonized continental digital technologies to respond to COVID-19, with particular attention to digital inclusion, patient empowerment, data privacy and security, legal and ethical issues, and personal data protection, which are values enshrined in the official African Union Trusted Health Framework and its digital archetypes: the Trusted Travel and Trusted Vaccines platforms, provided free of charge to support the digitization of COVID-19 response efforts. Recently, the government requested Africa CDC's support in setting up an entity to coordinate actions related to Africa CDC's activities in Madagascar. The Regional Integrated Surveillance and Laboratory Network is being deployed as part of the Africa CDC project and Madagascar's participation is essential in this regard. On genomic surveillance, Africa CDC could build NGS capacity by	TBC

Organisation	Support areas and activities	Contribution (where known)
	supporting laboratory upgrades (essential diagnostics and equipment, support the deployment of technical staff) and enhancing the technical capacity of laboratory staff, through (i) the Institute for Pathogen Genomics which aims to build a continent-wide functional and operational network of pathogen genomics and bioinformatics and (ii) regional hubs of laboratories to facilitate coordination as well as training, knowledge sharing and technical support.	

B. Results Monitoring and Evaluation Arrangements

71. Monitoring and evaluation of the COVID-19 vaccine administration will be done through the COVID-19 modules of the national health management information system (HMIS). These modules are packages under the existing District Health Information System Software (DHIS2) HMIS and will be deployed at the health facility level, including front-line health facilities. The rollout is coordinated by the *Unité de gouvernance digitale (*part of the Presidency) and the direction of health information of the MoPH (*Direction des Études, de la Planification et du Système d'Information*) and receives technical support from development partners, mainly WHO, UNICEF, USAID and the World Bank. The data entered into and produced by the packages will be used for reporting and decision making through the vaccine roll-out. The PCU will be strengthened through the addition of an M&E Specialist, who will report on the results framework and support the broader monitoring framework of the national vaccination plan.

72. The expanded HMIS, in addition to investments to the existing vaccine logistics information system, will meet the data needs of the NVDP. The expanded HMIS will allow for an immunization registry, the reporting of AEFI and for core COVID-19 analytics in accordance with WHO guidance. As such it will be possible to track vaccination coverage and adverse events at the individual level, which in turn allows for, e.g. the provision of personal vaccination certificates. More generally, the information systems will enable the MoPH, development partners, civil society organizations, researchers, regulators and suppliers to keep track of immunization status across different population/prioritization groups, stock levels and vaccine wastage. Importantly, the digital individual-level health information collected will have benefits beyond the COVID-19 vaccination rollout by supplying information on key anthropometrics such as height, weight, or age which, for example,are highly predictive of certain non-communicable diseases (NCDs). The system is robust to power and connectivity outages and "backward compatible" with the use of paper-based records.

73. The pharmacovigilance systems at health facility level using recommended standard procedures will be strengthened with more proactive strategies. Frequently asked questions geared towards frontline health personnel will be sent out and regularly updated through a two-way communication system with health professionals. The two-way system will also allow for health professionals to receive individual guidance where needed. A hotline for the broader public, available initially after the emergence of COVID-19 in March 2020 in Madagascar and discontinued due to lack of funding, will be reactivated. This will help with the channeling of AEFI reporting, with providing relevant information to the public, and with reporting misallocations of vaccines or elite capture**.**

74. The supported monitoring and follow-up systems are inherently digital. Madagascar uses DHIS2 as

the backbone of the HMIS, which itself is open-source and runs on PostgreSQL. This allows for wide interoperability and security. The DHIS2 systems make use of standardized metadata packages to facilitate data use nationally and internationally. The systems are modular and can interoperate with most commercial and non-commercial applications in health. For example, DHIS2 allows for end-to-end supply chain management in combination with an upstream logistics management information system. Due to this flexibility, several useful applications for optimizing the vaccine rollout are possible: (i) a vaccine appointment scheduling system, that draws on the individual vaccination records in DHIS2, including SMS reminders for patients; (ii) digital vaccination certificates for fully immunized patients; (iii) the use of machine learning to forecast localized vaccine needs and facilitate decision making; and (iv) follow-up by pharmacovigilance departments.

C. Sustainability

75. There is strong political commitment in Madagascar to mobilize financial resources for the COVID-19 response, including for vaccine purchase and deployment. The proposed project will establish an enabling environment for other donors, multilateral development banks and UN agencies to also support efforts in the country. Investments under the project, in conjunction with the pipeline pandemic preparedness project, are expected to strengthen the health system in the country, ensuring institutional sustainability to deal with vaccine-preventable diseases.

76. The project is expected to contribute about 20 percent of all vaccines that have been contracted by the GoM, and 40 percent of the deployment costs. This contribution corresponds to a large share of the counter-cyclical health response to COVID-19 (compare with a 2020 health budget of approximately US$200 million). The vaccination of the population against COVID-19 will help reduce the negative effects of the pandemic, including alleviating some of the downward pressures on economic growth. The sustainability of the project depends on several factors, including short-term investments in supply chain, communications, information systems and coordination. The investments in the immunization system and vaccination preparedness will improve readiness to respond to other vaccine-preventable diseases.

V. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

77. The economic rationale for investment in a COVID-19 vaccine is strong. The losses to health and livelihoods due to the pandemic are tremendous globally: as of June 13, 2021, more than 175 million people have been infected and the death toll is nearing 3.8 million.[24] Cumulative confirmed deaths from COVID-19 are still growing at a higher-than-linear trajectory, such that almost half (1.7 million) of all confirmed deaths from COVID-19 have occurred in the first five months of 2021. Global output is estimated to have declined by 4.3-6 percent in 2020.[25,26] Madagascar's economy is estimated to have contracted by 4 percent in 2020 after 4.9 percent growth in 2019. This is a recession comparable to the 2009 constitutional crisis. This was reflected in a sharp contraction in export revenues in Madagascar,

[24] COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (https://ourworldindata.org/coronavirus-data).
[25] World Bank. 2021. Global Economic Prospects. Chapter 1. January 2021.
[26] Congressional Research Service. Global Economic Effects of COVID-19. May 7, 2021.

particularly from tourism, textile and apparel, and mining, which were key sources of growth and job creation prior to the crisis.

78. The successful development, production, and delivery of a vaccine has the potential to reverse these trends and generate benefits that far exceed vaccine-related costs. The rapid and well-targeted deployment of a COVID-19 vaccine can help reduce the increases in poverty and accelerate economic recovery, as well as help to significantly reducing mortality and the spread of the COVID-19. This contributes to the safe reopening of key sectors that are impacted by the pandemic. The reopening of schools can also be accelerated through the deployment of the vaccine, translating to the averting of further human capital losses. The vaccines are expected to contribute to avoiding health care costs associated with morbidity from COVID-19. Global experience with immunization, even against influenza-like recurring seasonal diseases, indicates that vaccines are one of the best buys in public health.[27] Further benefits accrue from spillovers to non-COVID health outcomes. There are increased morbidity and mortality due to the interruption of essential services associated with COVID-19 containment measures that can be averted. This is due to, for example, reduced access to maternal and childcare services and routine immunization services as indicated by an analysis of health information collected at the health facility level.[28]

79. While the uncertainty around the costs and effectiveness of COVID-19 vaccines make it difficult to estimate precise cost-effectiveness figures, the effective launch of a COVID-19 vaccine will have direct benefits in terms of averted costs of treatment and disability as well as strengthened immunization systems. COVID-19 treatment costs in low- and middle-income countries are estimated at around US$50 for non-severe cases US$300 for severe cases. This excludes costs for testing of negative cases, as well as medical costs associated with delayed or forgone care. The estimated costs of vaccinating 20 percent of the population, enabling the vaccination of an additional 20 percent through support of deployment costs of COVAX funded vaccine, and strengthening of the vaccination system are at US$100 million. Even if the vaccine averts just two million non-severe cases and no further benefits are taken into account, the investment would break even. Further, investments in vaccine delivery systems generate health and economic benefits beyond just delivering the COVID-19 vaccine. Investments in last-mile delivery systems to administer the COVID-19 vaccine to remote communities will have spillover effects to effective delivery of other services, helping close the significant urban-rural gap. As the COVID-19 vaccine is introduced and lockdowns and movement restrictions are eased, patients can continue to access care for other conditions. Finally, the economic benefits of slowing down the economic downturn are likely to significantly exceed the costs of vaccination, leaving aside the immediate health benefits. Given both the economic and health system benefits, an effectively deployed COVID-19 vaccine presents significant benefits.

B. Fiduciary

Financial Management

80. Overall, the financial management (FM) arrangements that are to be applied in administering the project are assessed as adequate (will meet the World Bank's minimum requirements under World Bank Policy and Directive) and FM residual risk is assessed as substantial. The FM assessment of the current

[27] Maciosek MV, Solberg LI, Coffield AB, Edwards NM, Goodman MJ. Influenza vaccination health impact and cost effectiveness among adults aged 50 to 64 and 65 and older. Am J Prev Med. 2006 Jul;31(1):72-9.
[28] Global Financing Facility, World Bank. 2020. Analysis of continuity of essential health service delivery using routine health information system data in Madagascar.

PCU under the MoPH, the project implementing agency, was carried out in May 2021. The substantial risk is mainly attributed to (i) untimely flow of funds or lack of liquidity given the high requirements to pay the manufacturers and (ii) lack of adequate controls over the transparent, prioritized distribution and administration of vaccines, particularly for the most vulnerable population groups.

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

(i) One Senior Accountant and one Accountant will be recruited. The recruited staff will have the overall responsibility for the FM arrangements and for maintaining adequate FM system during implementation.

(ii) Internal controls will be strengthened to closely track vaccine distribution. To strengthen the internal controls over the distribution of vaccines up to final inoculation, a quarterly vaccine distribution monitoring template will be incorporated as part of the Interim Unaudited Financial Reports (IFRs), which will show the status of distributed, inoculated, damaged/wasted and remaining vaccines.

(iii) Given the risks related to vaccine project as well as the level of decentralization, a private firm will be recruited to conduct the internal audit reviews of the new project. The firm will be assisted by the internal auditor of the PCU.

(iv) A separate PIM will be developed for the proposed project. The PIM of the PARN (P160848) will be used as the reference for developing the PIM. The vaccine safeguard, distribution and deployment systems will be described in the PIM.

(v) In addition to annual financial audits, the same external auditor will be required to perform two agreed upon procedures reviews. The reviews will check compliance with systems, procedures and controls relating to vaccines management, controls and distribution. These reviews shall be conducted during the first 18 months of implementation.

(vi) 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. To mitigate liquidity risk, disbursements under contracts for goods, works, non-consulting services and consulting services procured or selected through international open or limited competition or Direct Selection, as set out in the procurement plan, must be made only through Direct Payment and/or Special Commitment disbursement methods. There will be no minimum value for direct payment and special commitment for the contracts under the procurement plan. The funds flow arrangements will be further detailed in the PIM.

82. As part of project appraisal, an FM assessment was conducted to evaluate whether the project implementing agency responsible for FM aspects meets the minimum FM requirements as per World Bank Policy and Directive. The FM assessment of the PCU, the project implementing agency, was carried out in May 2021 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 Streamlined Financial Management and Disbursement Procedural Measures for Preparation of Operations under COVID-19 Emergency Response

updated on March 23, 2020 and other relevant Guidance on Multiphase Programmatic Approach (MPA)[29]. The objective was to confirm whether the FM arrangements in place are acceptable considering the management of COVID-19 vaccines. 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 COVID-19 vaccine related issues.

Procurement

83. The procurement assessment found that the health PCU has demonstrated capacity and experience in managing World Bank funds. The PCU has a basic 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. 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 specialist for this purpose.

84. 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 August 2018 and November 2020; (ii) the World Bank's Anti-Corruption Guidelines: 'Guidelines on Preventing and Combatting Fraud and Corruption' revised as of July 1, 2016; and (iii) provisions stipulated in the Financing Agreement and the PIM.

85. 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.

86. For vaccines purchase, in addition to COVAX arrangement, AVATT is in the process of securing, through UNICEF, additional access to vaccines that would contribute to taking the total population covered up to 60 percent, in countries that request for it. When firm contracts are in place between UNICEF, as the appointed procurement agent, and the manufacturers, UNICEF will conclude contracts with participating countries for the supply of the vaccines. These contracts will be reviewed by the World Bank to ensure that they comply with all operational policies and provide value for money in terms of both price and delivery times before financing from this Grant can be disbursed toward the member country upon its request.

[29] Multiphase Programmatic Approach, issued on November 14, 2018. Task Team Guidance on preparing IPF-Financed Vaccination project papers under the COVID-19 SPRP) using the MPA – last updated on April 29, 2021.
Prevention of Fraud and Corruption in projects supported by the World Bank IPF Practical Advice to the Task teams (COVID-19 Operations).

87. A PPSD will be prepared within the first three months of implementation by the PCU and the MoPH. In addition, and on the basis of the PPSD, the PCU will prepare a Procurement Plan for the first 18 months of project implementation, and will be sent to the World Bank for approval. 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 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.

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

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

90. Madagascar's national procurement procedures are widely used for local World Bank 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 Standards

91. The project will largely have long term positive social impacts as it will enable affordable and equitable access to COVID-19 vaccines and play a critical role in further strengthening the health system. However, it could also cause major environmental and social (E&S) risks. These include social risk of inequity in access to vaccines, risks around inadequate or conflictual public engagement and lack of trusted and adequate consultation, increased risk of COVID-19 transmission (including through inadequate medical waste management) and adverse events following immunization. **As a result, five standards have been identified as relevant through the E&S risk screening**: ESS1: Assessment and Management of Environmental and Social Risks and Impacts; ESS2: Labor and Working Conditions; ESS3: Resource Efficiency and Pollution Prevention and Management; ESS4: Community Health and Safety; ESS10: Stakeholder Engagement and Information Disclosure.

92. Environmental and social management tools have been prepared. The project prepared the first Environmental and Social Commitment Plan (ESCP) which could be adjusted during the project life in keeping with the evolution of environmental and social risks and impacts; and a Stakeholder Engagement

Plan (SEP), describing a Grievance Mechanism (GRM). Both documents were disclosed on June 16, 2021 in-country and on the World Bank's website. The following documents shall be prepared, disclosed, consulted and adopted before the first disbursement: (i) an Environmental and Social Management Framework (ESMF) including a Social Impact Assessment, a Sexual Exploitation and Abuse and Sexual Harassment (SEA-SH) action plan and an E&S capacity assessment along with a capacity building action plan; (ii) Labor Management Procedures and (iii) an updated National Medical Waste Management Plan (MWMP).

93. Gender-Based Violence. SEA-SH risks are assessed as moderate. However, an SEA-SH prevention and response action plan will be provided in the ESMF.

94. Citizen engagement. Mechanisms to engage citizens, and target beneficiaries more specifically, in providing ideas and feedback on program delivery are helpful in identifying gaps at the point of service delivery (information availability, access to testing and vaccination, access to relevant care, equal treatment, and so on), build community knowledge and confidence, establish trust, ensure government responds to community needs (including vulnerable groups), and thus optimize the impact of the COVID-19 emergency response. The project has: (i) a citizen-oriented design, with a specific sub-component (sub-component 2.4. Strengthening communication and addressing vaccine hesitancy) which includes empirical communication campaign and behavioral change interventions, and (ii) a beneficiary feedback indicator in the Results Framework.

95. Environmental and Social Capacity for ESF instruments implementation. The project will be implemented by the current PCU within the MoPH, which is implementing the PARN with its two AF activities. Current E&S staff in the PCU includes one E&S safeguard specialist and a technical team of MoPH which is in charge of supervising and monitoring the implementation of waste management measures. The MoPH has more than 15 years of experience working with World Bank Safeguards, but less experience in ESF implementation. The team will be strengthened by one E&S specialist and one Social Mobilization and one Communication Specialist. The ESCP provides for the implementation of actions to build environmental and social capacity of the PCU and project stakeholders.

96. Resource implementation. Sufficient budget, as well as clear institutional responsibilities will be prepared for the implementation of measures related to implementation of E&S measures.

Gender Dimensions and Targeting Vulnerable Groups

97. Particularly in emergency situations and pandemics, gender inequalities and norms influence access to critical health services, as well as risk of exposure to disease. As summarized above, 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. Furthermore, while men do worse clinically once infected, women face a higher than average risk of COVID-19 infection, death, loss of livelihood, and 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.

98. There is also a risk that vaccine deployment plans could leave women and other vulnerable groups behind. Considering the larger male morbidity and mortality of COVID-19 and the tendency in many

countries to overlook the importance of gender inequalities in social and economic activity. Monitoring and implementing activities outlined in the ESCP, ESMF, and SEP will help ensure appropriate stakeholder engagement, proper awareness raising and timely information dissemination. This will help: (i) avoid conflicts resulting from false rumors; (ii) ensure equitable access to services for all who need it; and (iii) address issues resulting from people being kept in quarantine. These will be guided by standards set out by WHO as well as other international good practices including social inclusion and prevention of SEA and SH. Mechanisms to engage citizens, and target beneficiaries more specifically, in providing ideas and feedback on program delivery will help identify gaps at the point of service delivery (information availability, access to testing and vaccination, access to relevant care, equal treatment, and so on), build community knowledge and confidence, establish trust, ensure government responds to community needs (including vulnerable groups), and thus optimize the impact of the COVID-19 emergency response.

99. As detailed above, the project components also address gender dimensions with targeted interventions including: (i) integration of gender-responsive approaches in communications strategies with the public, including use of multiple accessible mediums in local languages; (ii) use of targeted messaging, and the creation of responsive platforms for registry of inquiries and grievances, through a variety of mediums to target women and different vulnerable groups; (iii) inclusion of interventions to support demand creation/restoration of essential RMNCAH-N services together with COVID-19 vaccinations, critical to averting increases in excess mortality and mobility for women and girls and improving access to sexual and reproductive health and rights; and (iv) support for promotion of awareness and use of GBV services, including the expanded network of integrated service centers at health facilities that offer medical, legal, psychosocial support and referrals. These interventions will be monitored and measured through the projects' results framework, and through safeguards instruments.

Climate

100. Climate risks and vulnerabilities. The project has been screened for short and long-term climate change and disaster risks, and risk to the project was identified as high due to cyclones, floods caused by storms, extreme rainfall, rising sea levels, and droughts. Madagascar is a large island located off the Eastern African coast, in the Southern Hemisphere. Temperatures are projected to increase between 1.1°C and 2.6°C by 2065, with highest projections for the southern part of the country. Rainfall is projected to increase for the southern part of the country during January to April and October to November, and to decrease during May through September, with greater decrease projected for inland areas. Projections are less certain for the northern part of the country.

101. Madagascar has one of the highest cyclone risks in Africa, averaging 3-4 cyclones per year, which are expected to increase due to rising global temperatures and the subsequent increasing ocean temperatures. Cyclones bring torrential flooding which can result in severe damage and losses across sectors (an estimated US$87 million in losses annually). For example, in 2015 tropical cyclone Chedza caused 68 fatalities and affected an estimated 80,000 people. Additionally, intense rainfall events caused by strong storms and tropical cyclones, as well as rising sea levels, coupled with poor land use practices, weak civil infrastructure, and increasing deforestation, have resulted in significant and damaging floods across the country. For instance, in the summer months heavy rainfall in combination with the lack of efficient rainwater drainage systems, often results in intense flooding in densely populated areas like the country's capital Antananarivo. This can subsequently result in extreme road degradation and damage to health facilities, limiting accessibility of immunization and other health services to the project's beneficiaries. Flooding increases the incidence of water-borne and diarrheal diseases (for example,

cholera, typhoid, rotavirus), which are the primary cause of morbidity and mortality in Madagascar, due to limited availability of clean and potable water. Over 30 floods or heavy rainfall events affected Madagascar in the past 30 years, killing hundreds of people and affecting thousands. Finally, droughts are also common, particularly in the south of the country where temperatures are highest, leading to food disruptions and interruptions in cold chain logistics for transporting COVID-19 vaccines. Temperature increases, coupled with warmer environments, also increase the incidence of vector-borne diseases like malaria.

102. Exacerbating the effects of increased human exposure to climate shocks, the country's infrastructure, has not been developed to cope with the effects of current and future climate events, especially in coastal zones and urban areas. This results in significant impacts on livelihoods, food security, infrastructure, access to safe and potable water and other sectors related to health and economic development. These hazards also disproportionately impact vulnerable populations, including the 74.5 percent of the population that live below the poverty line and 25 percent that are food insecure and highly dependent on climate-sensitive resources for their livelihoods. These populations constitute the poor, elderly, women, and children, some of whom include the project's target beneficiaries.

103. Climate policy landscape. Madagascar has shown its commitment to address climate change, and the climate-related activities for this project align with regional- and national-level climate priorities. In 2010, the country developed the National Policy to Combat Climate Change to promote and strengthen adaptation activities. The Ministry of the Environment, of Ecology, the Sea, and Forests (MEEMF) is responsible for coordinating, implementing, and mainstreaming climate change actions in social and economic sectors. The National Bureau of Climate Change Coordination, within MEEMF, oversees implementation of all measures in the country's Intended Nationally Determined Contribution. Additionally, on September 21, 2016, Madagascar ratified the Paris Agreement. The climate-related activities outlined in this project align with the national and global priorities to address climate change.

104. The proposed project intends to address these vulnerabilities and enhance climate resilience and adaptation through the following activities:

Table 9: Planned Climate Adaptation Activities

Project Component/Sub-component and Cost	***Climate-related action***	***Description***	***How will activity address climate-related vulnerabilities?***
Component 2.1: Strengthening Logistics, Cold Chain and vaccination Sites (US$14.6 million)	• Mobile outreach to climate vulnerable groups.	• Expansion of vaccination efforts by including mobile outreach services to reach target beneficiaries, including those most impacted by flooding from heavy rainfall, cyclones, and sea level rise.	• Increasing resilience of groups most heavily impacted by climate shocks. • Adapting country's vaccination distribution strategy to climate shocks (for example, cyclones, drought, flooding, and so on).

Project Component/Sub-component and Cost	***Climate-related action***	***Description***	***How will activity address climate-related vulnerabilities?***
	• Ensuring continuity of vaccination sites during climate shocks.	• Purchase of reusable tents, tables, chairs, and beds to make vaccination sites resilient to climate risks. This includes using tents to protect vaccination teams from extreme heat, and/or including flooding risk in the criteria for positioning vaccination sites to avoid impacts of flooding in flood prone areas.	• Adapting country's vaccination distribution strategy to climate shocks (for example, cyclones, drought, flooding, and so on).
Component 2.2: Strengthening surveillance and information systems (US$3.2 million)	• Strengthen monitoring of vaccines for climate-induced diseases.	• Support data collection and data infrastructure to improve and monitor vaccines to prevent diseases induced or exacerbated by climate shocks, particularly flooding and extreme heat (for example yellow fever, typhoid, and cholera). This will include procurement of data entry devices for use at vaccination sites as well as training of personnel in surveillance of vaccines and data entry.	• Strengthen vaccine distribution and monitoring of vaccines for climate-induced diseases.
Component 2.3: Strengthening capacitiy for managing and implementing immunization campaigns (US$5.7 million)	• Climate vulnerability assessment.	• Assessment will be conducted to identify gaps in preparedness for climate-related emergencies, particularly cyclones, sea level rise, floods, and drought, and opportunities for promoting climate-friendly planning in vaccine deployment and delivery.	• Strengthened preparedness and response to the country's climactic shocks, particularly cyclones, sea level rise, floods, and drought
	• climate-friendly planning of vaccine deployment.	• Develop contingency plans for safe vaccine delivery in case of climate emergencies, particularly cyclones, sea level rise, floods, and drought.	• Strengthen preparedness and response to the country's climactic shocks, particularly cyclones, sea level rise, floods, and drought.

Project Component/Sub-component and Cost	*Climate-related action*	*Description*	*How will activity address climate-related vulnerabilities?*
	• Preparedness and response to climate shocks.	• Provide training and guidelines for health workers' preparedness and response to climate shocks. Trainings will include specific modules and materials on preparedness and response to climactic shocks, particularly flooding and droughts.	• Strengthened preparedness and response to the country's climactic shocks.
	• Improve medical waste management in flood prone areas.	• Implement guidelines and staff trainings to strengthen medical waste management in flood prone areas through proper disposal of medical needles/syringes in syringe boxes and ensuring disposal sites are not in flood plains.	• Adapt waste management solutions to consider risks associated with flooding and increased rainfall.
Sub-component 2.4: Strengthening Communication and addressing vaccine hesitancy (US$3 million)	• Promote community trust and confidence in vaccines for climate-induced diseases.	• Implement national risk-communication plan to promote vaccine uptake and counter vaccine hesitancy and misinformation associated with vaccines for climate-induced diseases, particularly those induced by flooding and extreme heat (for example, cholera, typhoid, and yellow fever).	• Promote uptake of vaccines to combat vaccine-preventable diseases associated with climate-related factors (for example, cholera is associated with increased rainfall, flooding).
Sub-component 2.5: Project Implementation and Monitoring (US$2.5 million)	• Monitor climate investments	• The project's monitoring component will include monitoring of climate investments.	• Monitor implementation of climate investments against plans.

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

Table 10: Planned Climate Mitigation Activities

Project Component/Sub-component & Cost	*Climate-related action*	*Description*
Component 2.1: Strengthening Logistics, Cold Chain and Vaccination Sites	• Route Optimization for COVID-19 Vaccine Distribution.	• Group shipments, combined deliveries to locations, and structure routes for vaccine delivery to minimize distances travelled and fuel use. Vehicle routes will also be adjusted

Project Component/Sub-component & Cost	*Climate-related action*	*Description*
(US$14.6 million)		depending on weather and road conditions to improve fuel mileage and fuel efficiency of the vehicles.
	• Climate-friendly Cold Chain. (US$4.9 million)	• Purchase Solar Direct Drive Refrigerators and refrigerators which use low GWP refrigerants (GWP <150). • Implement procurement conditions to ensure that only solar direct drive refrigerators and low GWP refrigerators (<150) are used.
	• Digitize vaccine data to reduce paper usage.	• Implement digital vaccine data collection systems to reduce the use of paper. Currently, the system is entirely paper-based which involves registers at each facility and on which each vaccination is recorded. Digitizing the system will reduce paper, waste created and trees used for paper. Digitizing the system will also eliminate the transport of paper registers, reducing fuel consumption.

VI. GRIEVANCE REDRESS SERVICES

106. 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 Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of 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 Bank's corporate Grievance Redress Service (GRS), please visit: http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service. For information on how to submit complaints to the World Bank Inspection Panel, please visit *www.inspectionpanel.org*.

VII. KEY RISKS

107. The overall risk to achieving the PDO is high. The large-scale acquisition and deployment of COVID-19 vaccines contain significant risks. First, global demand for vaccines continues to exceed supply, and vaccines that meet the World Bank's VAC may not be available to be acquired in a timely manner. Second, a mass vaccination effort stretches capacity, in particular in Madagascar's low capacity, rural, low-population density, low-infrastructure environment. The proposed World Bank support for Madagascar to acquire vaccines and invest in deployment system capacity specifically aim to mitigate these risks. The

residual risk must be considered against the risk of the country having less timely and effective deployment of vaccines, potentially exacerbating development gaps and continued erosion of past investments and development gains.

108. Political and governance risks are substantial. There are political risks to the project related to the commitment and ability of the authorities to ensure appropriate targeting of the project-supported vaccines to reach the priority populations, based on public health criteria, and ability to manage public sentiment should there be a gap between vaccine targets and vaccine delivery. These risks will be mitigated through the assurance mechanisms that this project will support such as the establishment of an acceptable policy and plan for prioritized intra-country allocation. There are also risks related to governance of vaccine purchase and deployment, such as potential fraud and substandard quality. In addition, there are risks associated with fraudulent attempts to gain access to vaccines to be administered not following approved protocols of priority populations or for personal gain. This includes the risk of elite capture and of corruption in the implementation of the vaccination program. This will be mitigated through the government's vaccine oversight, verification, and monitoring efforts. In particular, project contributions for strengthening monitoring and tracking capacity through improved data and logistics systems and expanded public feedback mechanisms (detailed in the GRS section above) will contribute to mitigating this risk. Risks will be further mitigated through the application of anti-corruption guidelines for vaccine purchase and deployment, and robust financial management oversight of the use of funds, as elaborated in the fiduciary risks section below.

109. Sector strategies and policy risk is substantial. Existing health strategies and policies are only partially implemented due to a lack of operationalization plans or realistic budget considering the available financing. This risk will be mitigated by monitoring closely the implementation of the NVDP jointly with other partners and ensuring adequate reorientations are integrated based on the context and implementation of the campaign.

110. Technical design of project risk is substantial. The uncertainties around the timing of when COVID-19 vaccines will be available and the supply chain capacity to implement such a large vaccination effort may compromise the achievement of project's objectives. The World Bank will work closely with government officials (that is, the MoPH) as well as UN agencies involved in the pandemic response (WHO, UNICEF), to support the process of acquiring and delivering the COVID-19 vaccines. The World Bank's team will continue to support the country's efforts to access the necessary supply of vaccine.

111. Institutional capacity risk for vaccine deployment is high. The project is designed to address key institutional capacity risks but residual risks remain. Capacities in logistics, cold-chain, and human resources, information systems capacity are currently inadequate for the large-scale deployment of the COVID-19 vaccine. This risk will be mitigated by this project financing and technical support for immunization system strengthening, including conducting capacity assessments in coordination with WHO, GAVI, UNICEF, USAID, and other development partners coordinated by the MoPH. A dedicated COVID-19 operational command center chaired by the Minister of Public Health, has been operational since March 2020 for this purpose. The World Bank will continue to support the PCU through this project and the wider emergency response to the COVID-19 pandemic, including the implementation of the CERC and AF activities under the PARN as emergency response to the COVID-19 pandemic. In addition, the World Bank will continue to provide hands-on technical assistance through the weekly strategic group meeting to inform the COVID-19 related decision-making process, especially on vaccination campaign.

This will also be mitigated through the strengthening of existing and newly hired human resources, as well as the existing coordination and supervision bodies under component 2.

112. Fiduciary risks are substantial. The procurement and FM risks are substantial considering the uncertainties associated with the procurement and deployment of vaccines, including fraud and corruption risks. Risks specific to vaccines include:

- **Procurement:** The key procurement risk associated with vaccines relates to: (i) the complexity of the vaccines market given the significant market power enjoyed by vaccine manufacturers; (ii) inability of the market to supply adequate quantities of vaccines to meet demand; (iii) the limited market access due to advance orders by developed countries; (iv) weak bargaining; and (v) delays in triggering emergency procurement procedures, which could delay procurement and contract implementation, including payments. The risks under this project will be reduced by providing options to support Madagascar's needs for direct or advance purchase, including possible technical assistance through Bank Facilitated Procurement (BFP). BFP and bolstered fiduciary capacity in the PCU, as well as utilization of UN agencies for procurement of key supplies where appropriate, will also mitigate procurement risks.

- **Financial Management:** The key FM risks relate to: (i) untimely funds flow or lack of liquidity and (ii) lack of adequate controls over the transparent, prioritized distribution and application of vaccines, particularly for the most vulnerable population groups. This project will assess and strengthen control systems, facilitate the timely flow of funds, and ensure adequate liquidity to finance project activities.

113. The anticipated overall environmental and social risks are substantial.

114. The environmental risk rating for this project is Substantial. Each of the various stages of the vaccine deployment and vaccination processes are likely to entail occupational health and safety (OHS), environmental and social issues, and mass vaccination centers may pose risks for vaccinators, especially when performed in non-traditional settings and in high volumes. The main environmental risks identified are related to: (i) OHS issues, as workers in healthcare facilities and laboratories that may be exposed to infectious disease contagion, including use and disposal of medical supplies and chemicals for cleaning and disinfection; (ii) medical waste management, and (iii) community health and safety related risks such as increased risk of COVID-19 or other infectious disease transmission. In addition, vaccine transportation and distribution will entail road safety risks. Standards for vaccine management including chain cold infrastructure are required because COVID-19 vaccine products are temperature-sensitive. The current vaccine logistics system and cold chain have critical weaknesses and may present a risk to the safety of services which could affect the quality and effectiveness of vaccines. Other risks associated with the project activities include community health and safety risks from incorrect vaccine storage, handling and transportation practices leading to vaccine quality deterioration. Another factor within the environmental risks is the Recipient's E&S capacity to manage E&S risks and impacts. Their capacity is being assessed and appropriate capacity building measures will be included in the project and outlined in the ESMF. Technical assistance activities (immunization system strengthening including the strengthening capacities of key personnel in logistics, cold-chain, human resources, and so on) will be consistent with the ESS requirements, and their key direct and downstream risks are those related to safety services.

115. The social risk rating is also determined to be substantial. It is expected that project activities will have essentially positive social impacts by supporting the country's specific needs in preventing the spread of the COVID-19 and limiting immediate socioeconomic losses, as well as strengthening public

health and essential medical care structures and operations to build resilience and reduce the risk from emerging and re-emerging pathogens. Project activities consist mainly of purchasing medical equipment and inputs, technical assistance and capacity building; and will not involve involuntary resettlement and cultural heritage issues. The key social risk is that vulnerable and high-risk social groups, first targets of the vaccination campaign, are unable to access the COVID-19 vaccination, due to lack of information, distance from health centers, and possible elite capture. COVID-19 vaccination (safety and efficacy) is still a subject of debate, very sensitive to communicate, and presents a risk of non-acceptance which could lead to social unrest and tensions. Another particular risk that has come to the fore based on the ongoing implementation experience of the Global COVID-19 MPA is the increased incidence of reprisals and retaliation, especially against healthcare workers and researchers. The measures put in place to address the pandemic such as quarantining and physical distancing that affect livelihoods and access to services are likely to increase the risks of women and girls experiencing violence. SEA-SH risks need to be considered since women are given special attention among the priority groups; the associated risks are assessed as moderate based on the information available at this stage. Project implementation will also involve different types of workers including PCU staff, health civil servants, local CSOs staff, and community health workers which may raise OHS concerns. Finally, the current PCU has limited capacity and experience in managing social risks under the ESF.

116. Another substantial risk is linked to stakeholders being opposed to vaccination, thus increasing hesitancy of the population for vaccination. This risk will be mitigated through explicit inclusion in robust stakeholder identification and consultation processes and sharing evidence about efficacy and safety of vaccines. Further, and linked to the social risks stated above, it is important to have clarity on the risks that may arise related to any mandatory aspect of the national program and whether and how this mandatory element relates to cultural, social, and traditional community practices and values. Such risks need to be considered in light of the mitigation hierarchy and balanced against the health-related requirements of enrolling people in the vaccination program. In addition, the GRM required under the ESF should be in place and equipped to address community, worker, and/or individual grievances related to such issues. This includes requirements related to being able to have GRMs in place to address labor and working conditions, and SEA/SH.

117. Substantial risks associated with data management and privacy. These include risks of inadequate management and storage of personally identifiable data (PID), inappropriate sharing of PID, in identification systems, health information systems, and other management systems and databases. Mitigation measures may include legal, institutional and technical measures, as well as investments in data security and training of staff. PID will be available only to trained health professionals duly accredited, password protected on encrypted storage devices, with records of the doses administered using anonymized codes. Given concerns over limited data protection and privacy laws and the data security environment in Madagascar, the project will support required legal and safeguard measures for data privacy. These include: (i) where new digital tools/platforms are being added, there is a technical and financial risk of vendor lock-in; (ii) social risks of excluding population that are currently not registered in existing patient management systems (for example, for Human Immunodeficiency Virus (HIV), Tuberculosis, and NCDs, and broader national identification systems when vaccine deployment is scaled); (iii) risks associated with how changes in estimates can affect financing; (iv) risks associated with post-vaccination vigilance and monitoring system(s), to identify any adverse reactions on people and undertake corrective measures immediately. The planned corrective measures for these risks include: (i) close collaboration with key partners such as WHO and USAID to support Madagascar's broader strategy for

sustainable and effective data management and integration platforms; (ii) support of this project for the development of targeted vaccine identification strategies (with complementary support from the Governance Global Practice and the Identification for Development agenda (including but not limited to the World Bank Prodigy project); (iii) project support on procurement planning and budgeting, and support with hands-on implementation support where appropriate; (iv) project support to strengthen pharmacovigilance capacity.

VIII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Madagascar

Support to COVID-19 Vaccine Purchase and Health System Strengthening

Project Development Objective(s)

This Project's Development Objective is to support the Government of Madagascar to acquire and deploy COVID-19 vaccines, and to strengthen its immunization services.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	End Target
Support the Government of Madagascar to acquire and deploy COVID-19 vaccines			
Percentage of the population fully vaccinated, based on prioritized populations as defined in national plan (Percentage)		0.00	40.00
Percentage of females fully vaccinated, based on the prioritized population in the national plan (Percentage)		0.00	50.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	End Target
Acquisition and deployment of Project COVID-19 Vaccines and medical supplies			

Indicator Name	PBC	Baseline	End Target
Number of complete doses of eligible COVID-19 vaccine purchased through the project that arrived in the country (Number)		0.00	5,600,000.00
Strengthening health systems for the effective delivery of Project COVID-19 Vaccines			
Number of sites with functioning refrigerators purchased through the project (Number)		0.00	540.00
Number of health workers trained in vaccine administration within the project (Number)		0.00	4,000.00
Number of female health workers trained in vaccine administration within the project (Number)		0.00	2,200.00
Number of vaccination sites that received waste treatment equipment through the project. (Number)		0.00	2,720.00
Proportion of serious adverse events following immunization (AEFI) reported and investigated based on national guidelines (Percentage)		0.00	100.00
Percentage of frontline health care workers with the knowledge to recognize, medically manage, and refer GBV survivors to appropriate services (Percentage)		0.00	24.00
Percentage of immunization sites reporting data on time (Percentage)		0.00	80.00
Percentage of recorded grievances that are addressed in a timely manner (Percentage)		0.00	75.00

Monitoring & Evaluation Plan: PDO Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Percentage of the population fully vaccinated, based on prioritized populations as defined in national plan	Numerator: Number of fully vaccinated persons (who received the recommended number of doses of COVID-19 vaccine). Denominator: Total number of the population.	Monthly	DHIS2/MoPH	Routine data	PCU/Ministry of Public Health
Percentage of females fully vaccinated, based on the prioritized population in the national plan	Numerator: Number of fully vaccinated women. Denominator: Total number of fully vaccinated individuals (who received the recommended number of doses of COVID-19 vaccine).	Monthly	DHIS2/MoPH	Routine data	PCU/Ministry of Public Health

Monitoring & Evaluation Plan: Intermediate Results Indicators					
Indicator Name	**Definition/Description**	**Frequency**	**Datasource**	**Methodology for Data Collection**	**Responsibility for Data Collection**
Number of complete doses of eligible COVID-19 vaccine purchased through the project that arrived in the country	Number of eligible COVID-19 vaccine full doses purchased through the project that have arrived in the country. A full dose is determined	Monthly	Purchase order and receipts	Project Monitoring	PCU/Ministry of Public Health

	by the number of injection (s) required to fully immunize a person. 2 for AstraZeneca and 1 for Johnson & Johnson.				
Number of sites with functioning refrigerators purchased through the project	Number of sites with functioning refrigerators acquired through the project. Number does not include existing refrigerators	Quarterly	Installation reports from the department of vaccination of MoPH	Project Monitoring	PCU/MoPH department of vaccination
Number of health workers trained in vaccine administration within the project	Number of health workers trained in administering types of vaccines available. This includes part-time workers.	Quarterly	Vaccination training report	Project Monitoring	PCU/Ministry of Public Health, department of vaccination
Number of female health workers trained in vaccine administration within the project	Numerator: Number of female health care providers trained in the administration of the types of vaccines available. This includes part-time workers. Denominator: Number of health care providers trained in the administration of the types of vaccines available. This includes part-time workers	Quarterly	Vaccination training report	Project Monitoring	PCU/Ministry of Public Health, department of vaccination
Number of vaccination sites that received waste treatment equipment through the	Number of health facilities for which the waste	Quarterly	Environmental safeguard/M&	Project Monitoring	PCU

project.	treatment equipment acquired under the project is installed and operational.		E report of the project		
Proportion of serious adverse events following immunization (AEFI) reported and investigated based on national guidelines	Numerator: Number of serious Adverse Post-Injection Events (AEFI) reported and investigated according to country standards. Denominator: Total number of AEFIs reported	Monthly	DHIS2/MoPH	Routine data	PCU/Ministry of Public Health
Percentage of frontline health care workers with the knowledge to recognize, medically manage, and refer GBV survivors to appropriate services	Numerator: number of health workers with the knowledge to recognize, medically manage, and refer GBV survivors to appropriate services Denominator: total number of health workers	Quarterly	Vaccination training report	Project Monitoring	PCU/Ministry of Public Health, department of vaccination
Percentage of immunization sites reporting data on time	Percentage of vaccination sites that report data within the time frame defined by the Ministry of Public Health in DHIS2 of the MoPH	Monthly	DHIS2/MoPH	Routine data	PCU/Ministry of Public Health
Percentage of recorded grievances that are addressed in a timely manner	Numerator: Number of complaints registered in the grievance and redress mechanism that were addressed on time Denominator: Total	Quarterly	Safeguard report of the project	Project Monitoring	PCU

	number of complaints registered				

ANNEX 1: Summary table on vaccine development and approval status

Status of Vaccines as of 06/02/2021

Vaccine	SRA Emergency Use Approval	WHO PQ/EUL
BNT162b2/COMIRNATY Tozinameran (INN) - Pfizer BioNTech	United Kingdom: December 2, 2020 Canada: December 9, 2020 United States of America: December 11, 2020 European Union: December 21, 2020 Switzerland: December 19, 2020 Australia: January 25, 2021	WHO Emergency Use Listing (EUL): December 31, 2020
mRNA-1273 - Moderna	USA: December 18, 2020 Canada: December 23, 2020 EU: January 6, 2021 Switzerland: January 12th, 2021 UK: January 8, 2021	WHO EUL: April 20, 2021
AZD1222 (also known as ChAdOx1_nCoV19/ commercialized as COVISHIELD in India) - AstraZeneca/Oxford	UK: December 30, 2020 EU: January 29, 2021 Australia: February 16th, 2021 (overseas manufacturing); March 21st, 2021 (for local manufacturing by CSL – Seqirus) Canada: February 26, 2021	WHO EUL: February 15, 2021 for vaccines manufactured by SK Bio and Serum Institute of India
Ad26.COV2.S - Johnson & Johnson	USA: February 27th, 2021 Canada: March 5th, 2021 EU: March 11th, 2021 Switzerland: March 22nd, 2021 UK: May 28th, 2021	WHO EUL: March 12, 2021
BBIBP-CorV - Sinopharm		WHO EUL: May 7th, 2021
CoronaVac - Sinovac		WHO EUL: June 1st, 2021

ANNEX 2: Project Costs

COUNTRY: Madagascar
Support to COVID-19 Vaccine Purchase and Health System Strengthening Project

COSTS AND FINANCING OF THE COUNTRY PROJECT

Program Components	Project Cost	IBRD or IDA Financing	Trust Funds	Counterpart Funding
Component 1: Vaccine acquisition and other supplies	71	71		
Component 2: Strengthening health system for effective vaccine deployment	29	29		
Component 3: Contingent Emergency Response	0	0		
Total Costs	100	100	0	
Total Costs	100			
Front End Fees				
Total Financing Required	100			

ANNEX 3: Implementation Arrangements and Support Plan

COUNTRY: Madagascar
Support to COVID-19 vaccine purchase and health system strengthening Project

1. The World Bank's implementation support will focus on helping the MoPH to unblock potential operational bottlenecks by providing advice and undertaking analytics to strengthen the technical quality of implementation and assure timely implementation. The extent of implementation support that will be provided depends on recognized needs and opportunities.

2. In terms of strengthening compliance, technical assistance may be needed as described in the relevant sections of the Appraisal Summary. With fiduciary risk rated as substantial, technical assistance to procurement and FM will be prioritized, also with the UN Agencies supporting procurement process. The Project will use the existing PCU, appropriately staffed, with relevant qualifications. The project can support additional training in the use of the STEP and the new World Bank Procurement Framework. Implementation support for FM will be undertaken mainly during, and in response to the findings of, the semi-annual FM supervision reviews. For environmental and social safeguards, the World Bank will monitor compliance through the reports submitted by the PCU and take remedial and supportive action as needed.

3. Within the technical domain, the focus for the World Bank's implementation support will be related to the timely coordination of the pandemic response and COVID-19 vaccination. This will include technical assistance to: (i) COVID-19 vaccination and testing messages prepared; (ii) coordination mechanisms in place; (iii) curriculum and training approaches; and (iv) use of the relevant information technology systems.

4. Development partners are expected to provide technical assistance, and procurement operational support, to strengthen the implementation of select project activities, in line with their respective mandates. The WHO, with its in-country expertise and overall coordination role for COVID-19 response activities, will continue to be an important technical partner. UNICEF will have a technical and an operational role with respect to the procurement. The World Bank team will coordinate its implementation support with these partners to get the most value-for-money, avoid duplication, and exploit synergies.

5. While implementation support will be provided throughout project implementation, it is anticipated that more intense support will be needed in the first twelve months after project approval. The World Bank project team is based in the country and can provide in-depth support for the project set up, during the first twelve months, from approval to effectiveness, through early implementation, and after main activities are set. Implementation support in the first twelve months will focus on coordinating with development partners and capacity building of relevant institutions to support effective preparation and deployment of COVID-19 vaccination plans and increase of COVID-19 testing capacity.

Detailed financial management arrangements

6. The PCU is currently implementing the World Bank-funded P160848 PARN, the CERC related to the

P154698/P157909 Madagascar Sustainable Landscape Management Project[30] **as well as other donors' financings.** The PARN is broadly in compliance with FM reporting requirements since its effectiveness and the FM performance is moderately satisfactory. The external audit opinion for the fiscal year 2019 is qualified due to important undocumented advances disbursed to the implementing departments within the MoPH. Following the audit, the PCU implemented action plan to address the issue. Corrective actions include intensive collection of the required documentation from the various departments, suspension of disbursement for the departments non-complying with the reporting procedures to avoid recurrent issues. The latest internal audit report raised weaknesses over the fixed assets and inventory management. The PCU will implement corrective actions within the following six months. Potential disruption of disbursement for PCU is to be considered in the coming months, due to delay in processing annual commitment as well as documentation of budgetary execution as required by the national regulation. These steps are prerequisites to clearance of Withdrawal applications by the Ministry of Finance. The PCU expects to solve the related issues by mid-July 2021. The overall FM risk for the PARN 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.

7. The mitigation measures proposed will strengthen the internal control environment, maintain the continuous timely and reliability of information produced by the PCU and an adequate segregation of duties. These measures will also address risks related to COVID-19 vaccine project and include mainly (i) the recruitment of one Senior Accountant and one Accountant to support the existing team within the PCU, (ii) the development of the PIM based on the PARN implementation manual and considering the vaccine project's activities, (iii) the reinforcement of the internal control to closely track vaccine's distribution, (iv) the reinforcement of audit requirements, (iv) the recruitment of internal auditor for the project, and (v) the use of designated account with high ceiling and no minimum value for direct payment and special commitment to mitigate liquidity risk.

PLANNING AND BUDGETING

8. The NVDP, approved by the GoM in April 2021, will guide the budgeting and planning process of the project. The budgeting and planning procedures within the PARN will be used for this proposed project. The PCU will prepare the WPAB which will be cleared by the Steering committee. The WPAB shall be transmitted to the World Bank no later than the November 30th of the year preceding the concerned fiscal year. The first WPAB shall be available within two months after the signing of the Financing agreement.

9. The budget monitoring will be conducted using the accounting software of the PCU. 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.

10. Budgeting and budget monitoring arrangements will be described in the FM procedures manual to be developed as part of the PIM.

[30] The CERC related to the P154698/P157909 Madagascar Sustainable Landscape Management Project amounting 40 million USD, activated in September 2020, 12 million USD disbursed in May 28, 2021

ACCOUNTING AND REPORTING

11. The project will use existing accounting software within the PCU and prepare accounting reports on modified accrual basis. The accounting system will be maintained on a modified accruals cash basis with disclosure of commitments and will comply with the Malagasy General chart of accounts (*Plan Comptable Général* 2005) which is broadly in line with the International Accounting Standards and International Financial Reporting Standards. The PCU will use the existing accounting software to record projects financial transactions, monitor the budget execution and prepare the financial reporting. The accounting records will reflect adequately the project's structure in terms of components and sub-components and the source of funds.

12. The PCU will prepare quarterly un-audited IFRs for the project in a format that will be agreed with the World Bank. To strengthen the internal controls over the distribution of vaccines up to final inoculation, a quarterly vaccine distribution monitoring template will be incorporated as part of the IFRs, which will show the status of distributed, inoculated, damaged/wasted and remaining vaccines. These IFRs will be submitted to the World Bank within 45 days after the end of the quarter to which they relate. At the end of each fiscal year, the project will prepare annual financial statements which will be subjected to an external audit.

FUNDS FLOW AND DISBURSEMENT ARRANGEMENTS

13. The PCU will open a Designated Account (DA) denominated in United States Dollars at the Central Bank of Madagascar (*Banky Foiben'i Madagasikara*) to receive funds from the World Bank, in accordance with the applicable regulation[31]. Secondary account, denominated in Ariary or United States Dollars, will be opened at an acceptable commercial bank to enable payment of eligible expenditures. The process leading to payment as well as applicable disbursement methods will be described in the PIM. The Disbursement and financial information letter (DFIL) provisions will be tailored considering the project's need.

14. Transaction-based disbursements will be used for this project. 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 forecasted project expenditures payable through the DA after the project effectiveness. Subsequent disbursements will be made monthly against submission of the Statement of Expenditures (SOEs) or other documents as specified in the DFIL. The project will be allowed to use direct payment, advance, reimbursement, special commitment as disbursement methods. As for projects in situations of urgent need of assistance, Disbursements under contracts for goods, works, non-consulting services and consulting services procured or selected through international open or limited competition or Direct Selection, as set out in the procurement plan, must be made only through Direct Payment and/or Special Commitment disbursement methods.

15. An option of retroactive financing will be made available to the project covering up to 20 percent of the financing allocation for eligible expenditures incurred from April 30, 2021 up to the signing of the financing agreement. The project will claim the retroactive reimbursement by presenting SOEs for the period under reimbursement. The reimbursement will be refunded to the account of the expenditures.

INTERNAL CONTROLS

16. Internal control comprises the whole system of control, financial or otherwise, established by management to: (a) carry out project activities in an orderly and efficient manner; (b) ensure adherence to policies and procedures; (c) ensure maintenance of complete and accurate accounting records; and (d) safeguard the project's assets. The PIM will include a section on FM outlining project-specific requirements in relation to the budget, accounting, internal control and internal audit, funds flow, 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 PIM.

17. The PIM will clearly describe the contract's management, the fixed assets and inventory's management, the vaccine safeguard, distribution, and deployment system. The vaccine deployment will involve the temporary recruitment of health workers for the acute phase of deployment, payment of per diems for all staff involved in conducting the campaign and the use of mobile outreach services to expand vaccination efforts. The FM procedures related to the payment of the per diem, the dispatch, use and safeguard of IT materials for data collection will be defined in the PIM.

18. To mitigate the fiduciary risk related to vaccine purchase, the PCU will rely on manufacturers providing adequate securities on the products delivery. The acquisition is expected to be implemented through the AVATT and COVAX purchasing mechanisms. The GoM joined the COVAX facility in early April 2021 for procurement of COVID-19 vaccines. The project will apply the procurement procedures of the World Bank. The PIM will also consider the World Bank guidance on prevention of fraud and corruption.

19. The PCU will recruit one Senior Accountant and one Accountant to support the existing team. The Finance manager of the PCU will oversee the FM tasks related to the Vaccine project. A fiduciary agency was recently recruited under the PARN to ensure capacity building of FM staff of 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 the Vaccine project.

AUDITS, INTEGRITY ISSUES

Internal audit

20. Given the additional workload stemmed from this operation and the related risks increased by the level of decentralization, the PCU shall consider recruiting a private internal audit firm to work closely with the internal auditor in place. For the proposed project, the internal audit firm will include the review of the Vaccine Project in its audit plan and will conduct at least two regular internal audits per year for this project. Reports shall be communicated to the World Bank 30 days after the supervision mission. The firm shall be recruited within three months after the project effectiveness.

[31] 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.

External financial Audit.

21. 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.

22. In addition to the annual audit of the financial statement of the project, the external audit shall be required to perform two agreed upon procedures (AUP) review to check compliance with systems, procedures and controls relating to vaccines management, controls and safely reaching intended beneficiaries. The terms of reference of the review shall be agreed with the World Bank. The first review shall cover the first six months of project effectiveness while the second shall cover period 7th to 18th month (12 months) of project implementation. Copies of the AUP review report shall be submitted to the World Bank three months after the review period.

Fraud and corruption

23. The PCU will maintain adequate fraud and corruption arrangements during the project life span. The PIM will include a section on fraud and corruption and will take into account the World Bank guidance on Prevention of fraud and corruption and audit rights for COVID-19 vaccine operations. A well-designed grievance mechanism is in place within the PCU for the implementation of the PARN. Some challenges are encountered by the PCU hindering efficient collection feedbacks from beneficiaries and stakeholders. The PCU has already identified remedial action plan. The mechanism in place will be strengthened for the vaccine project implementation.

IMPLEMENTATION SUPPORT

24. The World Bank's FM team will provide implementation support over the project life span. Following a risk-based approach, supervision will focus on the effective operation of the proposed arrangements, including the review of audit reports, IFRs, internal audit reports and AUP reports. The FM Specialist will also provide advice to the task team on all FM issues. Based on the current assessed risks, 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.

Table 3.1: Risk 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 Public Financial Management (PFM) system and its weaknesses resulting in risk of lack of transparency and	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

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Conditions for Effectiveness (Y/N)	Residual Risk
accountability in the use of public funds.				
Entity level: Financial management requirements may not be met, weak financial management capacity.	S	The PCU will recruit one Senior Accountant and one Accountant to support the existing staff that possesses adequate experience and competence. The PCU will extend the assistance of the fiduciary agency recruited within the PARN, to this new project.	N	S
Project level: The resources of the project may be distracted due to weak control environment.	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.	N	S
Control Risk				
Budgeting: Weak budgetary execution and control leading to budgetary overruns or inappropriate use of project funds.	S	The budget of the COVID-19 vaccine program as part of the Government of Madagascar approved the National Vaccination and Deployment Plan (NVDP) was developed, discussed with all stakeholders, and approved by the Minister of Health. 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 Senior Accountant and one Accountant. The financial reporting preparation will be facilitated by the utilization of appropriate accounting software.	N	M
Internal Control: Lack of clarity for business process, role and responsibilities within the project resulting in ineffective control. Lack of adequate controls over the vaccine distribution and administration resulting in waste, inappropriate allocation, fraud and corruption. Weaknesses of fixed assets and inventory management leading to loss for the project.	H	The PCU will develop PIM for the new project based on the PARN manual. The PIM will clearly describe the contract's management, the assets and inventory's management, vaccine safeguard, distribution, and deployment system. The PIM will also consider the World Bank guidance on prevention of fraud and corruption. The IFRs will include a quarterly vaccine distribution monitoring template, which will show the status of distributed, inoculated, damaged/wasted and remaining vaccines. The external auditor will perform two AUPs during the first eighteen months of implementation to ensure adequacy of controls in place, and adherence to procedures.	N	S

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Conditions for Effectiveness (Y/N)	Residual Risk
		The PIM will describe comprehensive procedures with regard to inventory and fixed assets management. A private firm will be recruited to conduct the internal audit review of the project with the support of the existing internal auditor within the PCU.		
Funds Flow: ***Liquidity risk*** Advanced payments required with no securities offered by manufacturers, no benefit for use of Letter of Credit or Special Commitment. 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 vaccine delivery. 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 PCU will rely on manufacturers providing adequate securities on the products delivery. The acquisition is expected to be implemented through the AVATT and COVAX purchasing mechanisms. The Government of Madagascar joined the COVAX facility in early April 2021 for procurement of COVID-19 vaccines. 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 project's need (for example, no threshold for direct payment). 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 Ministry of Finance.	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 was defined prior to the negotiations and will include vaccine distribution statement.	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. The accounting software will lead to timely generation of quality reports.	N	M
Integrity issues Inappropriate safeguarding and tracking of vaccines once	H	The PIM will describe enhanced controls including inspection units and audit teams, to track, document and validate inoculations and ensure alignment with deployment plans.	N	S

Risk	Risk Rating	Risk Mitigating Measures Incorporated into Project Design	Conditions for Effectiveness (Y/N)	Residual Risk
delivered to the country (including proper cold storage) Weak oversight of vaccine deployment; measures need to be in place to mitigate multiple fraud and corruption risks at various points of the distribution and deployment system.		AUPs reviews will be undertaken during the first eighteen months of implementation to ensure adequacy of controls and compliance. Financial audits will be conducted annually over the use of financing for the entire project, including retroactive financing, vaccine acquisition, and so on. The PCU will put in place and maintain a robust grievance to ensure the adequacy of the vaccine distribution mechanism.		
Overall FM risk	H			S

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

Table 3.2: Financial Management Action Plan

Remedial action recommended	Responsible Entity	Completion date	Effectiveness Conditions
Agree on IFRs format enabling the vaccine distribution monitoring	PCU/WB	Prior to negotiations	No
Develop the PIM based on the PARN manual integrating particularities of the vaccine project in terms of beneficiaries' identification, vaccine distribution and deployment system, vaccine safeguard, frauds and corruption prevention measures.	PCU	Prior to disbursement under the Category 2	No
Prepare the TOR for the external audit considering two AUPs to be performed within the first eighteen months of implementation. Early recruit the external auditor.	PCU	No later than 1 month after the effectiveness No later than 3 months after the effectiveness date	No
Recruit one Senior Accountant and one Accountant to support the existing team within the PCU.	PCU	No later than 1 month after the effectiveness	No
Extend fiduciary agency mandate to support further with the new operation.	PCU	Prior to effectiveness	No
Extend internal auditor mandate to cover the new operation Recruit Internal audit firm to assist the existing staff.	PCU	No later than 3 months after effectiveness	No

Table 3.3: Summary of activities in the implementation arrangements and support plan

Timeline	Focus	Skills Needed	Resource Estimate
0–12 months	Setting up project implementation activities through institutional capacity strengthening, preparation for first procurement packages and technical assistance for implementation design.	Project management, operational, technical (including M&E), fiduciary, environment, and social.	At minimum, three formal implementation support missions. Just-in-time technical assistance.
12–36 months	Continued institutional capacity enhancement, implementation monitoring, operational and technical assistance to support implementation.	Project management, operational, technical (including M&E), fiduciary, environment, and social.	Three formal implementation support missions; just-in-time technical assistance.
Completion phase	ICR and final payments	Project management, technical, fiduciary.	ICR mission

ANNEX 4: Adjustments to the Country Program in Response to COVID-19 Madagascar

COUNTRY: Madagascar

Support to COVID-19 Vaccine Purchase and Health System Strengthening Project (P176841)

Impact of the COVID-19 pandemic on the country and government response

Recent developments

1. The trajectory of COVID-19 in Madagascar: Madagascar registered its first case on March 22, 2020. As of June 18, 2021, a total of 42,034 cases and 892 total deaths (2.12 percent death rate); and 210,637 tests were registered. The second wave is hitting Madagascar severely as other countries in Eastern Africa and the second peak was higher than the first (experienced July 2020). Of grave concern has been the high increase in the rate of new positive tests (above 20 percent since mid-March 2021) and the low testing capacity overall (despite significant increase since mid-March): around 1,120 per day since April. The number of cases notified increased since early April 2021 (around 370 new cases per day). This increase has been linked to the relaxation of the COVID-19 preventive measures over the festive season, when people disrespected the rules on social distancing, on avoiding crowds, and on wearing masks. New measures were taken on April 3, 2021 to limit propagation of the COVID-19 (limitations of movement between regions and curfew in Antananarivo). All 22 regions in Madagascar have seen cases with most cases centered around Antananarivo city major cities. Hospital capacities were overwhelmed in the capital city and mortality rate increased.

2. The COVID-19 crisis has triggered a deep recession and rising poverty. Economic activity in Madagascar has been severely impacted by disruptions to global trade and tourism arrivals, and by domestic containment measures. As the Gross Domestic Product (GDP) contracted by an estimated 4.2 percent in 2020, similar to that observed during the 2009 constitutional crisis, the loss of jobs and income resulted in rising poverty, with informal workers and vulnerable populations in urban areas particularly impacted. While growth is expected to resume in 2021,[32] reaching a modest 2 percent, the impact of the pandemic will cast a long shadow on economic and social prospects and could be compounded by other shocks, including natural disasters and rising social discontent.

3. Transmission Channels: Spillovers from the global downturn and restrictions to domestic movement affected economic activity most notably through the following channels:

- **Trade.** Global trade and travel disruptions had a severe impact on previously high-performing sectors in Madagascar. This was reflected in a sharp contraction in export revenues in mining, tourism and textiles, which were important sources of growth and formal job creation prior to the crisis. Overall, goods export values fell by 20 percent in 2020, reflecting a drop in both volume and prices amid weakening external demand. Although there were no specific limitations to air and sea cargo, supply chains and access to raw materials were disrupted, further dampening activity in trade-oriented sectors. The decline in vanilla prices combined with importers' reluctance to make longer-term commitments in this context of high uncertainty are also likely to generate a larger volume of unsold vanilla stocks. Such situation will increase the vulnerability of the less resilient rural producers.

- **Social distancing and travel restrictions:** Accounting together for almost 28 percent of Madagascar's economic output, the hospitality, transport, retail and real-estate sectors have felt the brunt of reduced movement, especially in urban areas, and the drop in international travel. Overall, 71 percent of surveyed companies reported a decline

[32] Assuming a marked recovery in global demand during 2021 supported by the gradual deployment of effective vaccines and announcements of additional fiscal support in some countries, and a stabilization of COVID-19 cases and robust public investments in Madagascar.

in the demand for their products and services in the first semester of 2020.[33] Small and medium-sized enterprises (SME) that have micro-enterprises or households as clients have reported stronger declines in revenues than the ones trading with larger companies. In response, businesses in Madagascar have cut wages, reduced working hours and laid-off workers or in some cases have been forced to exit the market altogether. By June 2020, around 32 percent of formal companies surveyed are estimated to have closed their doors (46 percent in the tourism sector), 7 percent permanently. Household surveys conducted in August 2020 indicate that 65.4 percent of respondents reported a loss of revenue since the start of the crisis.[34] Reducing food consumption was cited among the responses to lower income, thereby threatening long-term health for more vulnerable households.

4. Extreme poverty increased significantly in 2020, with vulnerable populations in urban areas particularly affected. Job losses in key manufacturing and service sectors, as well as the sudden loss of income for informal workers affected by lockdowns in major cities contributed to pushing a large number of people into extreme poverty this year. Against this background, the poverty rate (at US$1.90/day) is estimated to rise to 79.7 percent in 2020, up from 76.5 percent in 2019. Urban populations were more immediately affected by the COVID shock, but rural households were impacted as well by contracting demand, particularly for off-farm activities. The COVID-19 crisis also coincided with severe droughts in the Southern part of Madagascar, hampering livelihoods of at least 1.5 million people so far.

5. The budget deficit increased sharply in 2020 but was mostly financed by additional concessional financing. The sudden loss of fiscal revenues was a major driver of rising budget deficits in 2020, with the tax-to-GDP ratio falling back to 9 percent in 2020, its lowest level since 2012. On the spending side, government expenditures increased to reach 16.5 percent of GDP in 2020, notably driven by higher staff costs as salary adjustments were implemented and there was rising public investment. Overall, the fiscal deficit is estimated to have widened to 5.2 percent of GDP in 2020. The corresponding increase in fiscal financing needs from pre-outbreak expectations was covered by emergency budget support operations from development partners. Madagascar is also participating in the G20's Debt Service Suspension Initiative, although it only stopped debt service payments to bilateral official creditors from the G20 in the course of November 2020 due to administrative delays. The suspension is effective from June 2020 to June 2021. These various support measures and interventions are expected to help create fiscal space to address the economic and social consequences of the crisis.

6. Currency pressures have been manageable and foreign exchange reserves remain adequate. Adverse impacts of lower export revenues on the trade balance were partially offset by a drop in import values, reflecting lower demand for investment goods and a sharp decline in oil prices (oil imports account for 18 percent of total imports). The current account deficit nevertheless increased to 4 percent of GDP in 2020, while foreign direct investments weakened as well. Currency pressures increased amid rising external financing needs, with the Central Bank more than doubling its net foreign exchange purchases compared with 2019. However, comfortable reserves were maintained, bolstered by emergency budget and balance of payment support operations from development partners. The Central Bank operates under a flexible exchange rate regime but aims at preserving currency stability with targeted interventions.

7. The financial sector has been affected by rising credit risks, but solvency remains generally sound. Prior to the crisis, all banks fulfilled the minimum capital adequacy requirement, with a capital to risk-weighted assets ratio of 13 percent on aggregate, well above a minimum of 8 percent. The impact of the pandemic has led to deterioration in liquidity and solvency indicators, particularly for microfinance institutions (MFIs), which serve most exposed sectors of society including MSMEs, informal businesses and households. MFIs experienced cash flow difficulties due to delay in loan repayment and deposit withdrawals at the beginning of the containment, though the situation has stabilized since mid-2020. The banking sector has generally been more resilient but was also significantly affected by rising credit default

[33] Instat (Août 2020). Impact de la Covid-19 sur les activités des entreprises.
[34] Instat (Août 2020). Impact de la Covid-19 sur les conditions de vie des ménages. Vague 02.

rates. Proactive interventions of the Central Bank ensured the availability of adequate levels of liquidity, while banks were allowed to deduct loans to SME that have been restructured from regulatory reserve requirements. The extension of the existing Partial Portfolio Credit Guarantee Schemes for firms affected by the crisis has also helped.

Impact on Human Capital (Health and Education)

8. The COVID-19 pandemic created major challenges. Schools were closed for almost seven months due to the containment period, affecting over 244,000 teachers and over 7 million learners including nearly 902,000 preschool children and 4.6 million elementary school students. During the school closure, 40 percent of households did not engage in any support activities for their children's education. This rises to 60 percent for the poorest quintile, which suggests that the lost schooling will most severely affect children from the most vulnerable families. School exclusion and inequality will likely be exacerbated as marginalized children, including girls and children with disabilities, are more likely to leave the schooling system permanently. Despite schools reopening since end of October 2020, Madagascar will need support to attract learners (especially adolescent girls) back to school, ensure a safe and sanitary environment in all schools, come up with remediating measures to catch up , and continue to strengthen distance learning to offer a more flexible modality for students not returning to schools that can be scalable and implemented quickly in the cases of emergency.

9. The COVID-19 outbreak has had an adverse and prolonged impact on health services' delivery and utilization, particularly RMNACH-N. Based on analysis of routine data, significant disruptions of health services utilization were observed, especially in April, May and October 2020: compared to expected levels, most RMNACH-N indicators show a significant drop between 7-24 percent in April 2020, between 7-17 percent in May 2020, and between 8-12 percent in October 2020. Particularly concerning is the impact of children immunization, with decreases of 20 percent for Pentavalent Vaccine (Penta)1, 23 percent for penta2 and penta3, 18 percent for Bacillus Calmette–Guérin vaccine (BCG), and 18-24 percent for polio in April 2020. An important impact of COVID-19 on the health sector has been the high rate of infection among health staff, especially in the first months of the pandemic when personal protection equipment was not sufficiently available. Overall, this translates to reduced availability of staff to deliver care, particularly in areas most hit by the pandemic putting additional burden on the health workforce, who are already overworked due to the general scarcity of health professionals, and whose levels of anxiety and fear are significant and requiring adequate measures to ensure their mental health and well-being. Other important factors explaining the reduction in the provision of other essential services on account of resources being shifted to control the pandemic and manage cases, and on limited use of services by patients who fear being infected in health facilities.

10. Urban and peri-urban populations have been particularly impacted by the COVID-19 crisis and economic lockdown. The economic consequences continue to be severe, as efforts to control the spread of the virus have limited access to income-earning opportunities, trade activities, and markets. Households have faced reduced purchasing power as incomes decline and market prices increase for some goods. The prices of food staples in urban markets are up to 50 percent higher than the five-year average due to supply and transport restrictions.[35] Many of the urban poor work in the informal sector and lack protections or alternative sources of income during periods of work shortages, and nearly three-quarters of households experienced a drop in business income in June 2020.[36] Resilience capacity is low, and many poor households have resorted to negative coping strategies including reduction of food and non-food expenditures and selling assets to cope with the lockdown.[37]

[35] FEWS NET Key Message Update for Madagascar, July 2020.
[36] High Frequency Phone Survey results for Madagascar, June 2020. World Bank Group.
[37] *FEWS NET Key Message Update* for Madagascar, July 2020.

11. The economic downturn due to the COVID-19 crisis, compounded by recurring natural disasters and chronic poverty, continues to threaten Madagascar's economic development and long-term stability. The impacts of the crisis could reverse past progress in poverty reduction and deepen fragility. Prior to the current crisis, Madagascar was one of the poorest countries in the world and lagged on human capital indicators[38], including high rates of malnutrition, stunting, and children out of school. The coronavirus outbreak has intensified these challenges while pushing urban populations and notably women and youth, into positions of greater vulnerability due to strict confinement measures. Declining income per capita and rising inequality could sharpen the risk of social unrest, while the fiscal shock would also be heightened. Impacts of the current crisis on both poverty and stability could be compounded by further shocks, particularly from natural disasters.

12. Women and girls in Madagascar were already limited in reaching their full potential, particularly in the areas of human capital, empowerment, and labor participation, before the pandemic. There is strong evidence to suggest that women and girls in Madagascar will suffer from extreme and multifaceted negative secondary impact as a result of the COVID-19 crisis, including higher poverty rates, increase in unplanned pregnancies, a surge in school dropout rates and child labor of adolescent girls, loss of income and reduced financial empowerment, increased household work, reduced access to healthcare and WASH alongside increased maternal deaths, and greater food insecurity and malnutrition. Rates of early marriage among girls under 18 in Madagascar were already among the highest in the world, and as of 2018, 40 percent of girls under 18 were found to be in marital unions.[39] Gender-based violence is high, particularly in urban areas. Women are more likely to be excluded from financial services altogether, but in general rely more on informal financial services as compared to men.[40] These trends have made women even more vulnerable to income loss and exclusion due to the economic lockdown during the COVID-19 crisis.[41] Illiteracy rates among women are high, at 38.4 percent, compared to 34.2 percent of men.[42] These effects are compounded by restricted access to and use of productive and informational resources, as men are more likely to own cellular phones and have greater exposure to media and the internet[43].

Outlook and debt sustainability

13. Growth in Madagascar is projected to recover in 2021-23, but at a gradual pace and will continue to face underlying constraints. The global economic impact of the pandemic will persist in 2021 but assuming that new policy restrictions are able to contain community spread, and vaccination campaign accelerate, global growth and trade are expected to pick up in the course of the year. As global demand picks up in 2021, export and investments in Madagascar should regain some strength. However, the recession will leave a long shadow for businesses and households. In this context, growth is expected to remain subdued in 2021, at around 2 percent, which is insufficient to increase average income per capita levels. Overall, the crisis is estimated to have shaved over a two-year period about 13 percent to average income per capita when compared with pre-crisis expectations. In the baseline scenario, growth would bounce back to 5.8 percent in 2022 and stabilize at 5.4 percent in 2023-24, but the crisis will likely exacerbate constraints to growth associated with a lack of adequate infrastructure and human capital, poor governance, and limited capacity to respond to shocks.

[38] As of October 2020, Madagascar has a Human Capital Index of 0.39, reflecting that a child born in Madagascar today will be 39 percent as productive when she grows up as she could be if she enjoyed complete education and full health.
[39] INSTAT-UNICEF, *Madagascar Enquête par grappes à indicateurs multiples* (MICS), 2018 (Madagascar Multiple Indicator Cluster Survey)
[40]http://documents1.worldbank.org/curated/en/789051532448517077/pdf/128782-REPLACEmENT-Digital-MEU-Fostering-Financial-Inclusion.pdf
[41] ONEF. 2017. *Les Femmes dans la Vie Active et dans les sphères Décisionnelles (Women in active life and in Decision-Making Spheres)*
[42] INSTAT-UNICEF, *Madagascar Enquête par grappes à indicateurs multiples* (MICS), 2018 (Madagascar Multiple Indicator Cluster Survey)
[43] High Frequency Phone Survey results for Madagascar, June 2020. World Bank Group.

14. The poverty rate should resume its downward trend over the medium term. A gradual economic recovery should allow poverty rates to return to a declining trend from 2022 onwards, but the crisis is estimated to have set the country back by a decade in its effort to alleviate extreme poverty, which remains among the highest in Sub-Saharan Africa. Over the medium to long term, the pace of poverty reduction will largely depend on the country's ability to facilitate formal job creation in off-farm employment, improve agricultural productivity and resilience to climate and other shocks.

15. Debt sustainability risks have increased but remain moderate. The projected economic recovery in 2022-24 should result in gradually declining budget deficits, from an estimated 5.2 percent of GDP in 2020 to 3.2 percent in 2024. The main driver of this decline will be a recovery in government revenues, offsetting accelerating public investments, particularly in infrastructure. In this context, public debt is projected to stabilize around 52 percent of GDP in 2024, following a sharp increase in 2020 and 2021. External debt distress risks have increased in recent months from low to moderate, but baseline projections for key external debt and debt service ratios remain well clear of risk thresholds considered for Madagascar. This was confirmed by a joint IMF-World Bank Debt Sustainability Assessment in March 2021 as part of the preparation of the new IMF Extended Credit Facility (ECF) program, although pointing that additional export or growth shocks could generate liquidity problems unless mitigated by additional revenue mobilization and continued reliance on concessional financing. The assessment takes into account the authorities' participation in the G20's Debt Service Suspension Initiative. The current debt risk profile for Madagascar still makes plans to scale up priority investments appropriate but calls for prudent borrowing policies and fast-track reforms to boost revenue mobilization and public spending efficiency. Impacts of the current crisis could be compounded by further shocks, particularly from natural disasters or periods of social or political unrest. [44]

Financing needs

16. A Multisectoral Emergency Plan was adopted in July 2020 under the Prime Minister's office. The plan aims to (i) control the spread of the virus and stem the pandemic; (ii) help vulnerable populations and respond effectively to their needs; and (iii) protect the economy, maintain human capital, and facilitate the recovery. The plan is funded by the state budget and the donor community, building on emergency responses in health and social protection. As of February, 15 2021, the financing gap of the Prime Minister's Delivery Unit (PMDU) was estimated at US$107 million (out of US$826.1 million for the overall budget, 536.4 million excluding infrastructure), of which US$36 million is for health sector spending, US$28 million for agriculture, US$12 million for water and sanitation, US$11 million for nutrition, and US$11 million for transport.

Government response

17. The authorities acted promptly by declaring a State of Emergency on March 21, 2020 including closing schools, suspending events, limiting inter-regional traffic, closing borders, and limiting activity of private companies and public institutions. A multitask Operations Command Center led by the Ministry of Interior and Decentralization was also set up to coordinate the Government response. Measures to enhance resilience to shocks were and are being implemented through the preparation of a health security plan to respond effectively to future epidemics and progress toward the operationalization of the National Disaster Fund.

18. More specifically, lockdown measures were put in place on March 22, 2020 for the four most affected regions including Antananarivo, Toamasina, Fianarantsoa and Alaotra Mangoro. The State of Emergency was extended fourteen times until October 3, 2020. Lockdown measures were loosened up from end of May till end of June 2020. Following these release measures, there was a resurgence of cases of COVID-19 on July 6, 2020 for a period of one month and

subsequently the authorities imposed a second lockdown in the capital of Antananarivo. On August 9, 2020, the authorities, judging that the peak of the epidemic had been reached, decided to start re-opening gradually. Although the State of Emergency and curfews were sustained, government offices, private and public companies were allowed to resume gradually. Schools were allowed to carry out official examinations since September onwards. On October 18, 2020, the government decided to lift the State of Emergency. Wearing of masks in public remains mandatory, and most businesses and offices have implemented measures such as providing hand sanitizer and temperature screening. Restaurants, bars, beaches, parks, and public transportation are also open. However, borders are still closed, and international traffic are still suspended with the exception of repatriation of Malagasy and residents.

Government Measures to Support Households and Firms during the COVID-19 Crisis

19. An expansion of social protection programs is underway to support the livelihoods of the most vulnerable amongst the population. This includes a significant expansion in urban areas where social distancing measures are having the largest impact on incomes. Overall, the number of beneficiaries of social safety nets is set to increase from 2.5 million currently to 3.9 million people. Innovations in the targeting program are being introduced to rapidly identify beneficiaries through spatial poverty mapping and to expedite access to transfers by using mobile money transfers.

20. The government's response also seeks to safeguard livelihoods by providing support to SMEs and to ensure that the banking sector has sufficient liquidity to support the private sector.

21. A set of fiscal measures have been implemented to support firms, including:

- Temporary suspension of payment of installments and postponement of payment declarations for firms operating in the tourism and transport sectors and enterprises operating under free processing zones.
- Temporary deferral of payment of income tax.
- Temporary deferral of declarations and payment of the synthetic tax.
- Temporary suspension of tax audits and notices to third-party holders.
- Authorization to repatriate currencies up to 80 percent without penalty.
- Use of amicable payment conditions for social security contributions due for the first and second quarters of 2020.

22. In addition, the Multisectoral Emergency Plan envisages to support firms through:

- the provision of training to 200,000 formal employees.
- support for intercompany medical services to ensure the continuity of care services for employees, and to advise and train companies to better protect employees in the workplace.
- subsidized loans to support the cash flow of 20,000 entrepreneurs and MSMEs.
- communication and promotion actions to develop national and international markets.

23. Health and sanitation measures include in particular:

- Simplification of import procedures for medicines and medical equipment.
- Increased surveillance, testing and case management capacity, including infection prevention and control measures in health facilities and laboratories.
- Initiation of protocol development for continuity of essential services.
- Public communication campaign for prevention and test/detection updates.

24. Social Protection measures include:

- Expansion of the number of beneficiaries of social protection programs from 2,500,000 to 3,900,000 households.
- Simplifying ID requirements for mobile money transfers to social protection beneficiaries.
- Monitoring of market prices to curb opportunistic pricing.

25. Measures to support the financial sector: To alleviate pressure on SMEs and household cash flows, banks and microfinance institutions were encouraged to reschedule loan repayments for three months, and banks were allowed to deduct a similar amount from their reserve requirements. Exceptional liquidity has also been provided to the financial system, conditioned on an increase in credit to companies. The Central Bank kept an accommodative monetary policy stance throughout 2020 and 2021. The monetary policy response to the crisis has consisted of providing liquidity to commercial banks and the relaxation of some mandatory deposit limits to encourage banks to reschedule repayment on existing loans and boost credit to corporates. The Central Bank also implemented targeted foreign exchange interventions to alleviate currency pressures while maintaining ample reserves.

World Bank Support for responding to the crisis

26. The World Bank has adjusted its CPF in response to COVID-19. The significant impacts of the pandemic on Madagascar have had a major impact on Madagascar's development financing needs over the next two years requiring adjustments to the WBG country program.

27. World Bank support under the Relief Phase has required an additional US$351.76 million in IDA and non-IDA financing that was not anticipated under the CPF in FY21. In addition to the COVID-19 Response DPO (US$75m), an AF to PARN (P174669) (US$1.76 million), an AF to the Madagascar Basic Education Support Project/Emergency project of the GPE (P160442) (US$15 million) and the Support to COVID-19 vaccine purchase and health system strengthening (P176841) (US$100 million) are all new interventions not envisaged in the CPF. This phase of the response mobilizes resources from within the portfolio through activation of CERC and restructuring and scaling up of existing programs. The World Bank has allocated US$169 million to support the Government's health, social, education, water and sanitation plans, and leveraged an additional US$123 million to finance the Multisectoral Emergency Plan through other CERCs. Support to the agricultural sector, including the rice sub-sector, will be provided through an IPF which will finance measures to increase agricultural productivity and food security. Most project resources reallocated and mobilized for pandemic response through activation of CERCs have been replenished through AF operations during FY21. The Least-Cost Electricity Access Development Project (P163870) will support the electrification of approximately 500 of the 1,250 public health centers that remain unelectrified. The lack of well-equipped rural health centers is a major challenge for public health in Madagascar. It disproportionally affects rural areas, the poor, and female-headed households. By electrifying 500 rural health centers (40 percent of unelectrified Basic Health Centers [*Centre de Santé de Base*, CSB] II) across the country—mostly through off-grid technologies—the project will directly contribute to increasing the types and quality of health services available to the most vulnerable parts of the population. The project will enable lighting, refrigeration, sterilization, and other services that can significantly improve the quality of rural health care provision. The first phase with 50 health centers is ongoing and works are expected to be completed by the end of 2021. This is further detailed below in table 4.1.

28. The Restructuring Phase is supported by new activities in education, pandemic preparedness, urban and rural resilience, and digitalization. The GPE is providing an additional US$32 million in financing for the Basic Education Project (P160442) in order to ensure educational continuity at home during the pandemic-induced confinement period, prepare for reopening of post-containment classes and strengthen the resilience of the system in the face of shocks, including

natural disasters or health crisis. A new Pandemic Preparedness and Basic Health Services Delivery Project (P174903) US$150 million including US$19 million from the Global Financing Facility, will support government's efforts to implement the recommendations of a recent assessment of the country global health security systems and further reinforce the country's capacity to respond to future pandemics of COVID-19 magnitude. The new Resilient Livelihoods in the South of Madagascar Project (MIONJO) (P171056) (US$100 million) notably seeks to improve access to basic infrastructure and safe water, support livelihood opportunities and strengthen local governance in southern Madagascar with a primary focus on youth and women. The COVID-19 crisis has strengthened the role of WASH services to prevent the spread diseases and support livelihoods. Building on a strong track record in social protection, a social protection project has been brought forward from FY23 to help build resilience to future shocks. These three new operations responding to the pandemic were not envisioned in the CPF program. An AF to the Integrated Urban Development and Resilience Project (P175087) (US$50 million), will enhance urban living conditions and flood resilience in selected low-income neighborhoods of Greater Antananarivo; and to improve the Recipient's capacity. The Digital Governance and Identification Management System Project (PRODIGY) (P169413) US$140 million is a CPF operation that was adjusted to new circumstances. Altogether, this Phase of the response adds US$300 million in financing that was not anticipated in the CPF while US$345 million is as planned in the CPF.

29. The Resilient Recovery Stage is geared towards reinforcing infrastructure and private sector development. Of the US$1.1 billion in IDA Financing earmarked towards the recovery phase, US$1 billion are operations that will be delivered as planned with adjustment in design to increase resilience and take advantage of new opportunities to ensure a more sustainable, inclusive and resilient future in a world transformed by the pandemic. In addition, the AF to the Madagascar Integrated Growth Poles and Corridor SOP-2 Project (P175172), US$33 million, is part of a strongly complementary approach whereby the ongoing Madagascar Integrated Growth Poles and Corridor SOP-2 Project (P164536) is being restructured to scale-up immediate support to the private sector during the COVID-19 crisis, with additional funds from the portfolio-level CERC. The here proposed Economic Transformation for Inclusive Growth Project (P174241) US$150 million will provide significant support for the subsequent economic recovery, with an expanded sector and geographical coverage, and a focus on economic transformation including through digital entrepreneurship. Infrastructure related projects, a key pillar of the economic recovery, have been postponed until FY22 to accommodate the program changes outlined above.

30. In line with the World Bank Group COVID-19 Crisis Response Approach Paper from June 2020, resources have been realigned to support priority actions around the following four pillars (i) saving life, (ii) protecting poor and vulnerable people, (iii) ensuring sustainable Business growth and job creation and (iv) Strengthening Policies, Institutions and Investments for Rebuilding.

31. Program adjustments include: i) reallocation of portfolio resources through activation of CERC and restructuring and reallocations of existing programs; ii) developing new operations responding to the pandemic that were not envisioned in the original CPF program (for example, Pandemics preparedness program); and, iii) reprioritization of the CPF pipeline to advance operations that were planned for later years (from FY22/23 to FY21) while delaying selected new operations in infrastructure.

Table 4.1: World Bank COVID-19 Support

Areas of Intervention	IDA Amount Cost	Co-financing	Delivery
	(US$, millions)		
Pillar I: Saving Lives			
CERC/AF of Improving Nutrition Outcomes Project Using the Multiphase Programmatic Approach (P174669)	20		Delivered FY20
Support to COVID-19 vaccine purchase and health system strengthening project (P176841)	100		FY21 Q4
Madagascar COVID-19 Response DPO (P174388)	75		Delivered FY21
Pillar 2: Protecting Poor and Vulnerable People			
Restructuring/reallocation of Madagascar Social Safety Net Project (P174886)	10		Delivered FY20
Restructuring/reallocation of Financial inclusion project (P161491)	6		
AF Madagascar Basic Education Support Project/Emergency project of the GPE (P160442)		15	Delivered FY21
Second AF Improving Nutrition Outcomes Project Using the Multiphase Programmatic Approach of Nutrition MPA (P174669)- PEF facility (TF)	1.76		Delivered FY21
AF COVID response under Madagascar Social Safety Net Project (P174886) (Adj. to pipeline advanced from FY23 to FY21)	150		Delivered FY21
Support for resilient livelihoods in the South of Madagascar (MIONNJO) (P171056)	100.0		Delivered FY21
AF Madagascar Basic Education Support Project/GPE (P160442)	32.0		Delivered FY21
Phase 2 AF Improving Nutrition Outcomes Project Using the Multiphase Programmatic Approach of Nutrition MPA (P175110)	150		FY22 Q3
Girls Empowerment and Human Capital Development in Madagascar (P176393)	150		FY23 Q1
Madagascar DRM and Resilience Project	150		FY23, Q2
Agriculture Productivity Program (P175269)	150		FY22, Q2
Madagascar National Water Project (P174477)	150		FY22, Q2
Pillar 3: Ensuring Sustainable Business Growth and Job Creation			
Integrated Growth Poles and Corridor SOP2 - AF (P175172) (adjusted pipeline advanced from FY23)	33		Delivered - FY21
Integrated Urban Development and Resilience Project for Greater Antananarivo - AF (P175087)	50		Delivered – FY21
Madagascar Economic Transformation for Inclusive Growth (P174684)	150		FY21 Q4
Madagascar Road Sector Sustainability Project (P174378)	200		FY22, Q4
Pillar 4: Strengthening Policies, Institutions and Investments for Rebuilding Better			
Reallocation Urban Development and Resilience Project for Greater Antananarivo (P175087)	1		Delivered -FY21
Integrated Urban Development and Resilience Project for Greater Antananarivo - AF (P175087)	50		Delivered -FY21
Madagascar Covid-19 Response DPO (P174388)	75		Delivered - FY21
Digital Governance and Identification Management System Project- PRODIGY (P169413)		140.0	Delivered - FY21
Investing in Human Capital Development Policy Financing (P1743880)	150.0		Delivered FY21
Regional Statistics Project (P code tbd)	25		FY22 Q3

Areas of Intervention	IDA Amount Cost	Co-financing	Delivery
	(US$, millions)		
DPO series on fiscal management	150		FY23 Q1
Investing in Human Capital Development Policy Financing II (P171460)	150.0		FY22 Q2
Connectivity for Rural Livelihood Multiphase Programmatic Approach (MPA)	400		FY22 Q4
Digital Madagascar Project (P code tbd)	150		FY23, Q2
Madagascar Governance Decentralization (P code tbd)	150		FY23, Q2

Selectivity, Complementarity, Partnerships

32. The overall WBG response is aligned with the Government's Multisectoral Emergency Plan as well as the activities of other development partners. The World Bank is playing a critical role to further strengthen development partner response. These efforts have paid off, resulting in a coordinated response on budget support measures. Similar efforts were carried out to rally development partners around the response on health, social protection and private sector which are financed through a coalition of development partners and leveraging the donor coordination platforms. The Multisectoral Emergency Plan has served as a platform for identifying priority needs and coordinating donor support.

33. Other donors committed significant resources to support the Government's emergency response. Major bilateral donors included China, France, Norway amongst others, while multilateral donors included WHO, UNDP, African Development Bank (AfDB) and the European Union (EU). Among the largest, donors, the AfDB committed a total of US$61 million through the Special Relief Fund, the African Development Fund and the Transition Support Facility, while the European Union has allocated €24 million (US$28.5 million) in funding for health, social, and tourism, activities, while other donors committed a combined US$129.5 million in additional funding.

34. The World Bank COVID-19 response is closely coordinated with the IFC response. In line with the Approach paper, IFC's strategy supports the country COVID response through (i) emergency help focusing on agriculture for livelihoods and jobs, light manufacturing for health response, and financial sector support; (ii) help on restructuring through assistance to the financial sector, corporates and key sectors, and advisory to government on private sector support; and through (iii) recovery, where IFC will help mobilize private investment by supporting the expansion of access to power, the development of sustainable railroad and port infrastructure, by helping to build competitive global value chains, and by leveraging digital platforms to support smallholder farmers and MSMEs. IFC has continued disbursing in the agribusiness sector (US$3.3 million) in support of small holder farmers and has been deploying its available SME risk sharing facility (US$6 million) with a systemic bank as a crisis response. It is also in negotiation with a systemic bank for a medium-term loan (US$10 million). Furthermore, IFC is at different stages of discussing new financing and early disbursements for clients in the agriculture and financial sectors (for a total amount of US$19.3 million).

35. Further adjustments to the country program in response to heightened fragility risks are also planned. Beyond the regular IDA envelope for Madagascar, additional resources will be available through the Scale Up facility, which is particularly adequate for infrastructure projects, and regional integration programs, including for DRM and women empowerment, the new IDA 19 Crisis Response Window Early Response Financing that will address food security challenges in the South of Madagascar. From an operational viewpoint, procurement compliance and client's ownership during projects' preparation is key, emphasizing the need for continued training of civil servants, more effective use of PPA and propagation of best practices on implementation of operational procedures. Any bottlenecks should be addressed to maintain the country's fast delivery.