



# Report and Recommendation of the President to the Board of Directors

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## INTERNAL

Project Number: 55086-001  
August 2022

## Proposed Grant Republic of Maldives: Responsive COVID-19 Vaccination for Recovery Project under the Asia Pacific Vaccine Access Facility

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Asian Development Bank

## **CURRENCY EQUIVALENTS**

(as of 1 August 2022)

Currency unit	–	rufiyaa (Rf)
Rf1.00	=	\$0.066
\$1.00	=	Rf15.22

## **ABBREVIATIONS**

ADB	–	Asian Development Bank
APVAX	–	Asia Pacific Vaccine Access Facility
COVID-19	–	coronavirus disease
EPI	–	Expanded Program on Immunization
GDP	–	gross domestic product
GESI	–	gender equality and social inclusion
HECC	–	Health Emergency Coordination Committee
IEE	–	initial environmental examination
MOF	–	Ministry of Finance
MOH	–	Ministry of Health
NDVP	–	National COVID-19 Deployment and Vaccination Plan
PAM	–	project administration manual
PMU	–	project management unit
UNICEF	–	United Nations Children's Fund
WHO	–	World Health Organization

## **NOTE**

In this report, "\$" refers to United States dollars.

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## CONTENTS

	Page
PROJECT AT A GLANCE	
I. THE PROPOSAL	1
II. THE PROJECT	2
A. Rationale	2
B. Project Description	6
C. Value Added by ADB	8
D. Summary Cost Estimates and Financing Plan	8
E. Implementation Arrangements	9
III. DUE DILIGENCE	10
A. Technical	10
B. Economic and Financial Viability	10
C. Sustainability	10
D. Governance	11
E. Poverty, Social, and Gender	12
F. Safeguards	12
G. Summary of Risk Assessment and Risk Management Plan	13
IV. ASSURANCES	14
V. RECOMMENDATION	14
APPENDIXES	
1. Design and Monitoring Framework	15
2. List of Linked Documents	19



## PROJECT AT A GLANCE

1. Basic Data		Project Number: 55086-001	
Project Name	Responsive COVID-19 Vaccination for Recovery Project under the Asia Pacific Vaccine Access Facility	Department/Division	SARD/SAHS
Country Recipient	Maldives Republic of Maldives	Executing Agency	Ministry of Finance (formerly Ministry of Finance and Treasury)
Country Economic Indicators Portfolio at a Glance	<a href="https://www.adb.org/Documents/LinkedDocs/?id=55086-001-CEI">https://www.adb.org/Documents/LinkedDocs/?id=55086-001-CEI</a> <a href="https://www.adb.org/Documents/LinkedDocs/?id=55086-001-PortAtaGlance">https://www.adb.org/Documents/LinkedDocs/?id=55086-001-PortAtaGlance</a>		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Health	Disease control of communicable disease		10.000
		Total	10.000
3. Operational Priorities		Climate Change Information	
✓ OP1: Addressing remaining poverty and reducing inequalities		GHG reductions (tons per annum)	89.180
✓ OP2: Accelerating progress in gender equality		Climate Change impact on the Project	High
✓ OP3: Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability			
✓ OP6: Strengthening governance and institutional capacity		ADB Financing	
✓ OP7: Fostering regional cooperation and integration		Adaptation (\$ million)	0.713
		Mitigation (\$ million)	0.725
		Cofinancing	
		Adaptation (\$ million)	0.000
		Mitigation (\$ million)	0.000
Sustainable Development Goals		Gender Equity and Mainstreaming	
SDG 1.5		Effective gender mainstreaming (EGM)	✓
SDG 3.8			
SDG 5.5		Poverty Targeting	
SDG 10.2		General Intervention on Poverty	✓
SDG 13.a			
4. Risk Categorization:		Complex	
5. Safeguard Categorization		Environment: B Involuntary Resettlement: C Indigenous Peoples: C	
6. Financing			
Modality and Sources		Amount (\$ million)	
ADB		10.000	
Sovereign Asia Pacific Vaccine Access Facility: Asian Development Fund		10.000	
Cofinancing		0.000	
None		0.000	
Counterpart		0.770	
Government		0.770	
Total		10.770	
Currency of ADB Financing: US Dollar			





## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed grant to the Republic of Maldives for the Responsive COVID-19 Vaccination for Recovery Project under the Asia Pacific Vaccine Access Facility.<sup>1</sup>

2. The project will support Maldives in sustaining and upgrading its national coronavirus disease (COVID-19) vaccination program, implemented through the government's Expanded Program on Immunization (EPI), using the project investment component modality of the Asia Pacific Vaccine Access Facility (APVAX) of the Asian Development Bank (ADB). The grant will support investments in the storage, distribution, delivery, and administration of COVID-19 vaccines, along with related investments in capacity building, which will help ensure the success of the government's COVID-19 booster vaccine program.

3. The project is aligned with five operational priorities of ADB's Strategy 2030: (i) addressing remaining poverty and inequalities; (ii) accelerating progress in gender equality; (iii) tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability; (iv) strengthening governance and institutional capacity; and (v) fostering regional cooperation and integration.<sup>2</sup> It is consistent with ADB's country partnership strategy, 2020–2024 for Maldives, which prioritizes the strengthening of the country's health system.<sup>3</sup>

4. Maldives has fully met the APVAX access criteria as summarized in Table 1.

**Table 1: Compliance with Criteria – Asia Pacific Vaccine Access Facility**

Access Criteria	ADB Staff Assessment
Demonstrated adverse impact of COVID-19	As of 15 June 2022, Maldives had recorded 179,979 confirmed COVID-19 cases with 299 deaths. <sup>a</sup> Heavily dependent on international tourism, Maldives in 2020 experienced its largest economic contraction (33.5% of GDP, compared to 2019) because of the COVID-19 pandemic, making it one of the worst hit countries in the world. Although tourist arrivals rebounded in 2021 and 2022, tourism has not returned to 2019 levels, and the sanctions associated with Russian invasion of Ukraine are likely to dampen the recovery by reducing arrivals from Russia. <sup>b</sup>
Needs assessment completed	The needs assessment was completed in December 2020 using the COVID-19 Vaccine Introduction Readiness Assessment Tool. Maldives also performed a COVID-19 vaccine post-introduction evaluation in December 2021, with support from WHO. <sup>c</sup> The key remaining challenges identified in the evaluation are inadequate cold storage capacity, inefficient vaccine delivery, overstretched health workforce, and lack of an efficient vaccination management system.
National vaccine allocation plan	The original NDVP was introduced on 18 January 2021. <sup>d</sup> In light of the ongoing Omicron infection wave, the government decided to conduct a booster vaccination program to enhance people's immunity against COVID-19. An updated NDVP was issued on 10 January 2022 to guide the implementation of booster vaccination.
Incremental biomedical waste management	The waste associated with COVID-19 vaccination is managed as per the National Health Care Waste Management Policy and Strategy. A specific standard operating procedure for COVID-19 health care waste management is also in place. In addition, the World Bank-financed Clean Environment Project and Urban Development and

<sup>1</sup> The proposed project was prepared under the One ADB approach following streamlined business processes outlined in the Asia Pacific Vaccine Access Facility policy paper. Asian Development Bank (ADB). 2020. [ADB's Support to Enhance COVID-19 Vaccine Access](#). Manila.

<sup>2</sup> ADB. 2018. [Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific](#). Manila.

<sup>3</sup> ADB. 2019. [Maldives: Country Partnership Strategy \(2020–2024\)](#). Manila.

Access Criteria	ADB Staff Assessment
	Resilience Project helped improve biomedical waste management in the atolls, such as the introduction of autoclave equipment, which expanded the country's capacity to better manage incremental biomedical waste.
Governor's letter	ADB received the Governor's letter on 19 June 2022 confirming the government's commitment to implement its NDVP, including its prioritization plan, and confirming its commitment to comply with the APVAX vaccine eligibility criteria. <sup>e</sup> The letter also confirmed that the PIC-financed investments will be used to support the delivery of safe and effective COVID-19 vaccines that meet the vaccine eligibility criteria of APVAX.
Effective development partner coordination mechanism with clear role for ADB	The support of development partners is synergized and coordinated through well-established systems by MOF and MOH. All vaccine financing support is coordinated directly by MOF through its Resource Mobilization Department, with technical guidance provided by MOH. Overall command and control of the national response to COVID-19 was established with the activation of the HECC, which includes WHO and UNICEF as members. ADB is supporting MOH in setting up a development partners' forum to enhance development coordination in the health sector.

ADB = Asian Development Bank, APVAX = Asia Pacific Vaccine Access Facility, COVID-19 = coronavirus disease, HECC = Health Emergency Coordination Committee, MOF = Ministry of Finance, MOH = Ministry of Health, NDVP = National COVID-19 Deployment and Vaccination Plan, PIC = project investment component, UNICEF = United Nations Children's Fund, WHO = World Health Organization.

<sup>a</sup> MOH. [COVID-19 Situation Overview](#) (accessed on 17 June 2022). Malé.

<sup>b</sup> ADB. 2022. [Asian Development Outlook \(ADO\) 2022: Mobilizing Taxes for Development](#). Manila.

<sup>c</sup> MOH. COVID-19 vaccine post-introduction evaluation. Unpublished.

<sup>d</sup> The NDVP covers the key areas of (i) regulatory preparedness; (ii) planning and coordination; (iii) costing and funding; (iv) identification of the target population; (v) vaccination delivery strategy; (vi) supply chain and management of health care waste; (vii) management and training of human resources; (viii) vaccine acceptance and uptake; (ix) vaccine safety monitoring, management of adverse events following immunization, and injection safety; and (x) monitoring and evaluation.

<sup>e</sup> The Governor's letter attaching the latest version of the NDVP (update of January 2022) is in Annex I of the Country National Vaccination Prioritization and Allocation Plan (accessible from the list of linked documents in Appendix 2).

Source: Asian Development Bank.

## II. THE PROJECT

### A. Rationale

#### 1. Impact of the Pandemic

5. **The pandemic.** The first confirmed COVID-19 case in Maldives was recorded on 7 March 2020, and the first local transmission was confirmed on 15 April 2020. Since then, the country has experienced several waves of COVID-19. The latest and so far biggest, attributable to the Omicron variant, lasted from December 2021 to March 2022, increasing the confirmed cases to 179,979 (with 299 deaths) as of 15 June 2022.<sup>4</sup>

6. **Costs to the economy.** Maldives' real gross domestic product (GDP) contracted by 33.5% in 2020 with respect to 2019. Tourism declined dramatically right after the onset of the COVID-19 pandemic—only about 555,000 tourists visited Maldives in 2020, 67% fewer than the 2019 record high of 1.7 million tourists.<sup>5</sup> Construction and civil works activities also decreased drastically, mainly because of illness among workers and the breakdown in the supply chain and logistics systems. Maldives reopened its borders to all travelers from all countries on 15 July 2020. In 2021, tourist arrivals rebounded strongly to 1.3 million, or 76% of the 2019 level, once

<sup>4</sup> Ministry of Health (MOH). [COVID-19 Situation Overview](#) (accessed on 17 June 2022).

<sup>5</sup> The World Bank. 2021. [Maldives Development Update 2021](#). Washington, DC.

increased vaccination rates both globally and domestically made it possible to ease travel restrictions. Although the tourism industry is reviving, it remains below pre-pandemic levels, and the risk that the recovery could be compromised by the emergence of new COVID-19 variants.

7. **Impact on disadvantaged groups.** The pandemic, and the containment measures taken by the government to curtail it, adversely affected the economic and health status of disadvantaged groups, especially income-poor communities, people with disabilities, migrant workers, and residents of geographically remote islands. It had a major impact on the general population's ability to meet financial obligations. About 90% of business owners, and people working in tourism and food-related enterprises reported being affected by the pandemic, some losing all their income and nearly 50% losing their employment.<sup>6</sup> People with disabilities could not avail of essential health services because home services were suspended. The populations in the outer atolls and islands were particularly affected by the difficulties in providing health care and other basic services in geographically remote areas.

8. **Impact on women.** The Ministry of Economic Development estimated that about 12% of women in the workforce lost their jobs. National Job Center data showed that unemployment and complete loss of income were more frequent for women than men.<sup>7</sup> Women in the informal sector remain vulnerable to the ongoing presence of COVID-19, i.e., about 44% (compared with 36% of men) do not have job security. The pandemic has also deepened the wage gaps between women and men. About 32% of women earned less than their partners and 21% of women even had no earnings at all during the pandemic.<sup>8</sup> Unpaid care work also increased for women, particularly for single mothers. Restrictions on mobility constrained women's access to essential services such as maternal, sexual, and reproductive health care. About 68% of women reported a deterioration in their mental and emotional health because of economic stress and increased gender-based violence.<sup>9</sup>

9. **Impact on the health system.** The direct impact of COVID-19 in Maldives has been substantial—more than 30% of the population required COVID-19 care between March 2020 and May 2022. Since the country's health system is dispersed across many islands and a large sea area, besides the high-density Greater Malé area, health authorities were stretched to meet the demand for high-volume COVID-19 testing and to provide care to the affected. It did not help that about 50% of doctors and nurses are expatriate staff, which seriously constrained human resources and made it more difficult to manage the increasing burden of COVID-19 cases.

## 2. Government's Response

10. **Measures introduced to control the pandemic.** In response to the COVID-19 outbreak in January 2020, the country activated the emergency response and early preparedness section of the Health Protection Agency of the Ministry of Health (MOH). Under the Health Emergency Operations Plan, MOH's director general of public health formed the Technical Advisory Committee, the Health Emergency Task Force, and rapid response teams to take early and decisive action to mitigate the effects of the crisis and curb the transmission of the disease. In 2020, to improve Maldives' pandemic response capacity and health system resilience as well as mitigate the negative economic and livelihood impacts of COVID-19, the government announced

<sup>6</sup> United Nations Development Programme (UNDP). 2020. [Rapid Livelihood Assessment: Impact of the COVID-19 crisis in the Maldives](#). New York.

<sup>7</sup> Ministry of Economic Development. [The impact of the COVID-19 pandemic on employment in the Maldives](#). Malé.

<sup>8</sup> National Bureau of Statistics. 2019. [Household Income and Expenditure Survey \(2019\)](#). Malé.

<sup>9</sup> UNDP. 2020. [Gender-Differentiated Consequences of COVID-19 on women's and men's economic empowerment in the Maldives](#). New York.

a \$351 million (equivalent to 8.71% of Maldives' GDP in 2020) COVID-19 response package. The package covered (i) health care capacity building, (ii) social protection schemes for the disadvantaged population, and (iii) economic assistance for individuals and businesses.<sup>10</sup> Most government schemes and interventions under the package were timely completed during 2020–2021. As the pandemic is now under control, and the public health emergency regarding COVID-19 pandemic has been revoked by the government in March 2022, the remaining funding of the package has been reallocated to support post-COVID-19 recovery, including supporting skill enhancement of wage and self-employed workers, promoting employment in critical sectors such as tourism and renewable energy, and enhancing the social protection system.

11. **National vaccine road map, prioritization, and allocation plan.** The government issued the initial version of the National COVID-19 Deployment and Vaccination Plan (NDVP) on 18 January 2021.<sup>11</sup> Since then, Maldives' COVID-19 vaccination allocation and prioritization was periodically updated to reflect the evolution of the pandemic and the expanded scope of COVID-19 vaccination in accordance with the immunization recommendations from the strategic advisory group of experts of the World Health Organization (WHO). Following the onset of the recent Omicron infection wave, the government initiated a booster vaccination program that is still ongoing. From November 2021, boosters were provided to people aged 50 and above but are now extended to all people aged 12 and above. The government also intends to expand the vaccination to include the 5–11 year-olds from September 2022. An updated version of the NDVP was issued on 10 January 2022 to guide the booster program. Table 2 summarizes eligible groups currently covered under the overall vaccination program.

**Table 2: Eligible Population Covered by COVID-19 Vaccination (as of August 2022)**

Prioritization	Population (%)	Population Number <sup>a</sup>
Frontline health and social care workers	3.00	16,723
Those at high risk of developing complications	17.00	94,762
Frontline essential workers and international travelers	30.00	167,228
Remaining adult population	25.74	143,462
12–17 year-olds <sup>b</sup>	6.77	37,720
5–11 year-olds <sup>c</sup>	9.25	51,556
<b>Current total coverage</b>	<b>91.76</b>	<b>511,451</b>

<sup>a</sup> Estimated total population: 557,426.

<sup>b</sup> Currently only eligible to receive the initial two-dose regimen of COVID-19 vaccine.

<sup>c</sup> Expected to be started from September 2022.

Source: Ministry of Health. 2022. *National COVID-19 Deployment and Vaccination Plan (2.0)*. Malé.

12. **Governance and institutional arrangements.** The Health Emergency Coordination Committee (HECC), co-chaired by the Minister of State for Health and the Vice President of Maldives, provides overall oversight of the national response to COVID-19. MOH's director general of public health directs the overall management of the COVID-19 vaccination program. The National Technical Working Group provides technical guidance to MOH. A national steering committee, chaired by the health minister, is responsible for the planning, implementation, monitoring, and evaluation of the COVID-19 vaccination program, and coordinates with key development partners such as WHO, United Nations Children's Fund (UNICEF), and Maldives Red Crescent. The national steering committee is advised by a subcommittee and various technical working groups on areas such as domestic vaccine logistics and transportation.

<sup>10</sup> International Monetary Fund. [Policy Response to COVID-19](#). Washington, DC.

<sup>11</sup> The NDVP is in Annex 1 of the Country National Vaccination Allocation Plan (accessible from the list of linked documents in Appendix 2).

13. **Vaccine deployment arrangement.** The country's COVID-19 vaccination efforts are managed under the EPI of MOH. Through the EPI, nationwide COVID-19 vaccination took place in hospitals and health centers, in temporary vaccination sites such as schools and community centers, or via outreach teams for home services. More than 785 vaccinators were mobilized to administer the vaccines at vaccination sites according to the NDVP (footnote 11). However, given MOH's constrained human resources, most members of the EPI team that centrally supports the planning, operation, and monitoring of COVID-19 vaccination were temporary contractors engaged by WHO. Their contracts ended in early 2022, so MOH's human resource capacity should be urgently augmented to ensure a successful COVID-19 booster program.

14. **Vaccine logistics and monitoring.** Maldives successfully managed the COVID-19 vaccine logistics, albeit by drawing on all available resources on an emergency basis. The central cold storage facility in Malé is a temporary solution—the building is dilapidated and situated on a property that belongs to other government agencies. While the government received sufficient cold chain equipment such as freezers, walk-in coolers, and refrigerators from several development partners, it was not used optimally because of the limited space in the temporary central cold storage facility. Even though some of the equipment could be installed temporarily in hospitals by using space originally designed for delivering other health services, the current storage capacity still cannot accommodate the required volume of vaccines for both the COVID-19 program and routine immunization services. Given the insufficient cold storage capacity, the government had to postpone the delivery of new vaccine donations and even send donated vaccines to other countries to avoid wastage. As for transport, MOH has a limited number of vehicles and these are inadequate for the delivery of essential health services to outer islands. MOH had to seek the support of private speed boats and seaplanes or mobilize coast guard vessels and land vehicles from other government agencies to distribute vaccines across the country. Although such support significantly reduced the transportation cost of COVID-19 vaccine in 2021, it is considered unsustainable for managing the logistics of both booster vaccination and the routine immunization in the longer term.

15. **Immunization waste management.** The disposal of waste associated with COVID-19 vaccination is governed by the National Healthcare Waste Management Policy and Strategy (2016). The policy requires that all waste generated within the health sector be managed safely without adverse effects on human health and the environment.<sup>12</sup> Detailed standard operating procedures were also developed for the management of COVID-19-related waste generated in health, isolation, and quarantine facilities. The National Logistics Working Group, chaired by the deputy director general of the Health Protection Agency, is responsible for COVID-19 logistics coordination and services, including waste management. The Maldives Environmental Protection Agency and the Waste Management Department of the Ministry of Environment are responsible for regulating the final disposal process in line with the guidance provided in the Waste Incineration Guidelines (2016), to mitigate and avoid adverse environmental hazards. As per the recommendations of the Ministry of Environment, all COVID-19-related health care waste is considered infectious in nature and must be collected safely in designated containers and bags, treated, and then safely disposed of as general waste, or incinerated or burned. Health care workers were given training on the use of protective equipment, hand hygiene, personal hygiene, and respiratory etiquette while handling COVID-19-related waste. Although the immunization waste management capacity of vaccination sites was strengthened with the support of UNICEF, capacity gaps remain, not least because the temporary central cold storage facility offers insufficient physical space to properly manage immunization waste or expired vaccines.

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<sup>12</sup> MOH. 2016. [National Healthcare Waste Management Policy](#). Malé.



16. **Vaccination progress.** Maldives started its national COVID-19 vaccination program on 1 February 2021 with 100,000 doses of Covishield vaccine donated by India. As of 27 June 2022, 71.12% of the total population (80.15% of women and 65.91% of men) had received the first two doses of COVID-19 vaccine, and 30.08% (31.17% of women and 29.45% of men) also received at least one extra dose.<sup>13</sup>

17. **Remaining gaps for effective booster vaccination.** Although Maldives attained early success with its COVID-19 vaccination program in 2021, that achievement was built on an unsustainable vaccine delivery approach that highly relies on temporary support provided by other government agencies, private sector, and development partners. According to the COVID-19 vaccine post-introduction evaluation conducted by MOH with support of WHO in December 2021,<sup>14</sup> major remaining challenges are (i) insufficient capacity for cold chain storage with proper temperature monitoring; (ii) inefficient vaccine delivery because of the unavailability of land and sea vehicles, and unreliable (weather-dependent) ferry services; (iii) lack of adequate quality control checks of vaccine supplies; (iv) inefficiencies in vaccine inventory management and reporting; (v) overstretched human resources in both the national immunization program and public health units across the country; and (vi) inadequate training of frontline health workers on the rollout of vaccines. Given that external recurrent support from WHO, UNICEF, and the private sector was almost finished in early 2022, the country needs to scale up its vaccine storage, delivery, and management capacity to maintain a high degree of immunity against COVID-19 and to ensure a more efficient, cost-effective, and sustainable process for its booster vaccination.

### 3. Development Partner Coordination

18. All COVID-19 vaccination-related financing support is coordinated by the Ministry of Finance (MOF) through its Resource Mobilization Department, while all technical support from development partners is coordinated by the Policy Implementation and International Relations Division of MOH. Technical development partners such as WHO and UNICEF are members of the HECC. The financial support of ADB and technical support of other development partners are synergized and coordinated through frequent bilateral and multilateral consultations. A coordinator consultant mobilized by ADB has been deployed to MOH for enhancing the development coordination of the project. ADB's role in the overall COVID-19 vaccination program is clearly defined as supporting the strengthening of vaccine cold storage and delivery capacity, and the planning and monitoring capacity of the booster vaccination program. Assisted by ADB, MOH will upgrade development coordination by setting up a development partners' forum later in 2022 to enhance the synergy of ongoing and pipeline COVID-19 vaccination and health sector support from ADB, the World Bank, WHO and UNICEF.

#### B. Project Description

19. The project aims to support Maldives in implementing its COVID-19 booster vaccination drive by filling in a timely fashion the key remaining gaps in the vaccination system, as identified in the COVID-19 vaccine post-introduction evaluation (footnote 14), and to help it reinforce its

<sup>13</sup> MOH. COVID-19 vaccination status updates as of 27 June 2022. The vaccines used for providing the first two doses and the booster dose are mostly donations from COVID-19 Vaccines Global Access (COVAX) or other countries: 124,000 AstraZeneca vaccines, 12,000 Covishield vaccines, and 235,170 Pfizer vaccines from COVAX; 260,000 Covishield vaccines from India; 250,200 Sinopharm vaccines from the People's Republic of China; 112,000 AstraZeneca vaccines from Japan; and 339,300 Pfizer vaccines from the United States. The government also procured 100,000 Covishield vaccines and 545,400 AstraZeneca vaccines using its own resources.

<sup>14</sup> MOH. COVID-19 vaccine post-introduction evaluation. Unpublished.

climate and disaster resilience. The project is aligned with the following impact: resilience and responsiveness of health systems to COVID-19 enhanced, and uninterrupted supply of quality COVID-19-related vaccines ensured.<sup>15</sup> The project will have the following outcome: the deployment of COVID-19 vaccines and other vaccines under the EPI effectively managed.

20. **Output 1: Capacity of vaccine storage and transport system increased.** The project will strengthen the vaccine cold storage and cold chain delivery capacity of the EPI. This will help handle the increased volume of vaccines warehoused in the country for ongoing COVID-19 vaccination and future needs, while ensuring the uninterrupted delivery of routine immunization services. Specifically, the project will support the construction of a climate-resilient and renewable-energy-powered central vaccine cold storage facility in Hulhumalé with adequate space to properly store vaccines, dry items, medicines, medical supplies, and laboratory equipment. The new facility will include dedicated areas for repairing and maintaining cold chain equipment; managing vaccine waste, with autoclave and shredder installed; training EPI staff; and hosting the backup center for national immunization data. It will also provide adequate office space for Health Protection Agency staff to ensure that their immunization, disease control, and prevention work can be better coordinated and more efficiently executed. The entire new facility will have gender equality and social inclusion (GESI)-responsive features<sup>16</sup> and replace the current temporary central cold storage facility in Malé. In addition, the project will strengthen COVID-19 vaccine distribution and logistics administration by providing 7 speed boats (1 each for the 6 regions of the country and 1 for the Greater Malé area); 2 refrigerated trucks for vaccine and medical goods distribution; and 2 vans for immunization services in the Greater Malé area.

21. **Output 2: Information management of the EPI strengthened for COVID-19 vaccination and routine immunization.** The output will support the digitalization of the vaccination information management system of the EPI, to enable timely and efficient planning, implementation, monitoring, and evaluation of the COVID-19 vaccination program and routine immunization as a whole. The output will ensure that the immunization-related information systems currently developed by WHO and UNICEF will be digitally linked to the national health data system and implemented across all health facilities concerned. Specifically, this output will (i) help set up the national health data center by providing the necessary information technology equipment; (ii) enable the national health networks to link all islands, atolls, and the Greater Malé area to receive or share health data disaggregated by sex, age, location, comorbidity conditions, and nationality; (iii) set up a backup server center in the new central cold storage facility; (iv) support the digitalization of individual immunization data collection at all health care centers by procuring mobile devices for the public health staff to directly enter the immunization data as well as other public health data; and (v) upgrade the video conference system at 20 atoll health facilities for training and coordination purposes.

22. **Output 3: Human resource capacity of the EPI enhanced.** This output will strengthen the human resource capacity of the EPI to manage the COVID-19 vaccination program as well as routine immunization as a whole, considering both short and long-term human resource needs. This output will provide consultant support in key technical areas so that the EPI, the national health data center, and the biomedical service unit can meet the immediate needs. This will ensure faster availability of necessary human resources while MOH completes its regular recruitment process for permanent staffing. To further support a sustainable, long-term human

<sup>15</sup> ADB. 2021. [ADB's Support to Enhance COVID-19 Vaccine Access](#). Manila; and Government of Maldives. 2018. [Strategic Action Plan: 2019–2023](#). Malé.

<sup>16</sup> The design will include separate toilets for men and women, child daycare and lactation areas, and access support for people with disabilities.

resource capacity, the output will also provide specialized training to newly hired MOH staff to help ensure their retention in these positions before the completion of the project. Furthermore, the output will also carry out short-term training of current EPI staff and health care workers who are involved in the provision of immunization services on relevant topics in vaccination and disease control. The output will also help MOH in strengthening its project implementation and development coordination capacity by setting up the project management unit (PMU) and facilitating the project steering committee.

### C. Value Added by ADB

23. The project gives Maldives much-needed support for its COVID-19 vaccination program by procuring land and sea vehicles, and rapidly scaling up the EPI's human resource capacity. The sea vehicles can also be used in the intervals of vaccination campaigns for the health system more generally to enhance the delivery of medical supplies and supplement the transportation of patients and health care providers. The project will also help overcome the shortage of physical space for vaccine cold storage, gaps in vaccination data management, and the shortage of human resources, and thereby ensure the resilience of the EPI to future pandemics. The project builds on previous ADB support to contain and manage COVID-19 in Maldives. This includes the \$50 million COVID-19 Active Response and Expenditure Support (CARES) Program, which gave the government the budgetary means to mitigate the adverse social and economic impacts of the COVID-19 pandemic, as well as other interventions to improve pandemic response capacity.<sup>17</sup> While the CARES program supported the necessary increase in public spending to curtail the spread of the disease, a more comprehensive, timely, and efficient vaccination program backed by the new project will further ensure the resumption of economic activity so that the fiscal situation in the country can improve.

### D. Summary Cost Estimates and Financing Plan

24. The project is estimated to cost \$10.77 million (Table 3). Detailed cost estimates by expenditure category for each output are included in the project administration manual (PAM).<sup>18</sup>

**Table 3: Summary Cost Estimates**  
(\$ million)

Item	Amount <sup>a</sup> (millions)	Share of Total (%)
<b>A. Base Cost</b>		
1. Output 1: Capacity of vaccine storage and transport system increased	7.41	68.80
2. Output 2: Information management of the EPI strengthened for COVID-19 vaccination and routine immunization	1.08	10.03
3. Output 3: Human resource capacity of the EPI enhanced	1.27	11.79
<b>Subtotal</b>	<b>9.76</b>	<b>90.62</b>
<b>B. Contingencies<sup>b</sup></b>	<b>1.01</b>	<b>9.38</b>
<b>Total</b>	<b>10.77</b>	<b>100.00</b>

<sup>a</sup> In May 2022 prices at an exchange rate of \$1 = Rf15.33. Inclusive of taxes and duties of \$0.53 million. Such amount does not represent an excessive share of the project cost. The government is financing taxes and duties of \$2.37 million, of which \$0.77 million is through cash contribution and \$1.60 million through exemption.

<sup>b</sup> Includes physical contingencies and price contingencies and a provision for exchange rate fluctuation.

Source: Asian Development Bank estimates.

<sup>17</sup> ADB. 2020. [COVID-19 Active Response and Expenditure Support Program](#). Manila; ADB. 2020. [COVID-19 Emergency Response](#). Manila; and ADB. 2020. [Regional Support to Address the Outbreak of Coronavirus Disease 2019 and Potential Outbreaks of Other Communicable Diseases](#). Manila.

<sup>18</sup> Project Administration Manual (accessible from the list of linked documents in Appendix 2).



25. The government has requested a grant not exceeding \$10 million from ADB's Special Funds resources (Asian Development Fund) to help finance the project. The summary financing plan is in Table 4. ADB will finance the expenditures in relation to civil works, cold chain equipment, vehicles, information technology equipment, consulting services, training, and the PMU. The government will provide counterpart financing for office equipment, equipment and furniture for the newly constructed central vaccine cold storage facility, the renovation of the national health data center, taxes and duties, and operation and maintenance costs occurred during the project implementation period.

**Table 4: Summary Financing Plan**

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Special Funds resources (ADF grant)	10.00	92.85
Government of Maldives <sup>a</sup>	0.77	7.15
<b>Total</b>	<b>10.77</b>	<b>100.00</b>

ADF = Asian Development Fund.

<sup>a</sup> The government will contribute \$0.77 million in cash contribution for the procurement of equipment and furniture for the new cold storage facility, and to cover maintenance and operating costs of new assets, renovation costs of the server room, and taxes. In addition, the government will provide custom duties exemption of \$1.6 million; that amount is not included in the cost table and treated as in-kind contribution.

Source: Asian Development Bank estimates.

26. Climate mitigation is estimated to cost \$0.725 million, and climate adaptation is estimated to cost \$0.713 million. ADB will finance 100% of mitigation costs and 100% of adaptation costs. Details are in the Climate Change Assessment.<sup>19</sup>

## E. Implementation Arrangements

27. MOF will be the executing agency, and MOH will be the implementing agency. A project steering committee chaired by the Minister of Health or any official designated by the Minister of Health will be established and provide strategic guidance, review performance, and take timely strategic measures to achieve the project outputs. MOH will administer the grant proceeds and will be responsible for procurement, financial management, and overall project implementation activities. A PMU comprising officials from the ministerial departments concerned and PMU staff financed via output 3 will be set up within the Policy Implementation and International Relations Division of MOH.

28. The implementation arrangements are summarized in Table 5 and described in detail in the PAM (footnote 18).

**Table 5: Implementation Arrangements**

Aspects	Arrangements
Implementation period	October 2022–December 2025
Estimated completion date	31 December 2025
Estimated grant closing date	30 June 2026
<b>Management</b>	
(i) Oversight body	Project steering committee chaired by the Minister of Health or any official designated by the Minister of Health with members from the MOF and MOH departments concerned.
(ii) Executing agency	MOF
(iii) Implementing agency	MOH
(iv) Implementation unit	Policy Implementation and International Relations Division of MOH

<sup>19</sup> Climate Change Assessment (accessible from the list of linked documents in Appendix 2).

Aspects	Arrangements		
Procurement	OCB (internationally advertised)	3 contracts	\$6.75 million
	OCB (nationally advertised)	4 contracts	\$0.99 million
	RFQ	5 contracts	\$0.41 million
Consulting services	CQS	24 person-months	\$0.25 million
	ICS	432 person-months	\$0.61 million
Disbursement	The grant proceeds will be disbursed following ADB's <i>Loan Disbursement Handbook</i> (2017, as amended from time to time) and detailed arrangements agreed between the government and ADB.		

ADB = Asian Development Bank, CQS = consultants' qualifications selection, ICS = individual consultant selection, MOF = Ministry of Finance, MOH = Ministry of Health, OCB = open competitive bidding, RFQ = request for quotations. Source: Asian Development Bank.

### III. DUE DILIGENCE

#### A. Technical

29. The proposed project is an integral part of the government's national COVID-19 vaccination program, which aims to achieve full coverage of the eligible population. Accelerating access to COVID-19 vaccines and enabling a comprehensive, timely, and efficient booster vaccination will substantially reduce mortality and morbidity. A timely COVID-19 vaccination and booster program will help avert the cost of productivity and productive time loss of the population; reduce public spending on COVID-19 testing, hospitalization, and quarantine; and bring the economy back to normal by significantly easing the disease burden. It is critical for the recovery of tourism and the overall economy. Sustaining high COVID-19 vaccine coverage will also help the government better manage its fiscal and debt situation, since stronger growth will allow for revenues to improve. The proposed construction of a climate-resilient and renewable-energy-powered green building in Hulhumalé to house the national vaccine cold storage facility allows the government to substantially reduce the maintenance and recurrent costs of storage. The new building is expected to be prone to extreme weather events such as cyclones and sea level rise, so its design and construction will factor in such hazards and risks.

#### B. Economic and Financial Viability

30. As a health crisis, the COVID-19 pandemic goes beyond mortality and morbidity in the infected population. People tend to avoid seeking medical care during a pandemic because they are worried about contagion, which worsens the overall health outcome. The pandemic also affects the mental and emotional health of the population. Containment and social distancing policies brought economic activity to a near standstill: at least 13% of the employed population of Maldives was affected by the crisis, through either job loss or income loss. A comprehensive, timely, and efficient vaccination program with monitoring in place is necessary to contain the virus fast and minimize the cost of productivity and productive time lost. This is particularly relevant for Maldives' economy—not only because tourism and hospitality account for 25% of the country's GDP but also because the country is heavily dependent on foreign workers in essential industries.<sup>20</sup>

#### C. Sustainability

31. The financial analysis assessed the sustainability of the project. The government's capacity and commitment to absorb any incremental recurrent costs arising from the project was assessed. Although the government's fiscal position remained constrained and was further exacerbated by the COVID-19 pandemic, the sustainability of the project investment can be

<sup>20</sup> Economic Analysis (accessible from the list of linked documents in Appendix 2).

ensured given the increasing budget allocation for MOH. Also, the result of the review of historical financial information, and the existence of constitutional and legal frameworks affirm that the government will continue to provide the needed financial support to the health sector and that resources will be adequate to sustain the incremental recurrent costs arising from the project. The financial analysis concludes that the project is expected to be sustainable.<sup>21</sup> In addition, the equipment, vehicles, and building financed by the project will not only ensure the effective implementation of the ongoing COVID-19 vaccination drive but also help bridge the capacity gap of the EPI and thereby enable MOH to continue it beyond project completion, which in turn ensures the long-term sustainability of the project investment.

## **D. Governance**

32. **Governance.** The Auditor General is responsible for the audit of all state institutions, state accounts, extra-budgetary units, and state-owned enterprises under the Audit Act 04/2007. In addition, public offices are scrutinized by the Anti-Corruption Commission and Public Account Committee. In 2019, a State Internal Audit Committee was established to further strengthen governance and accountability of public funds and assets. ADB's Country Performance Assessment 2020 indicated that Maldives' overall score is moderate and had improved since 2016. Also, thanks to the government's anticorruption efforts, Maldives ranked 85th (out of 180 countries) in the 2021 Corruption Perception Index of Transparency International, an improvement from 130th place in 2019. ADB's Anticorruption Policy (1998, as amended to date) was discussed with and explained to the government and MOH.

33. **Procurement.** All procurement to be financed by the ADB grant will be carried out in accordance with the ADB Procurement Policy (2017, as amended from time to time) and ADB Procurement Guidelines (2017, as amended from time to time). Following the APVAX policy (footnote 1), ADB member country procurement eligibility restrictions will be waived, and universal procurement will apply. ADB's Anticorruption Policy will apply to all contracts to be financed under the project. The executing agency (MOF) has satisfactory experience in handling procurement for ADB-financed projects, while the implementing agency (MOH) will receive consulting support to offset its comparative lack of procurement experience. The procurement plan for the project, including review procedures to be followed, is in the PAM (footnote 18).

34. **Financial management.** ADB conducted a financial management assessment for the project and found that MOH has overall satisfactory financial management capacity, systems, policies, and procedures. However, this capacity needs to be augmented for adequate project implementation. The measures to fill the gaps and increase the required capacity were agreed with the government. The overall pre-mitigation financial management risk is rated *substantial*, mainly because (i) MOH has constrained staff capacity and limited experience in implementing ADB projects, (ii) the PMU is yet to be constituted, (iii) the project budget is yet to be allocated, (iv) historic delays exist in fund reconciliation and liquidation, and (v) the internal audit function is weak and inexperienced. The financial management risks will be mitigated by (i) constituting a PMU with dedicated and qualified financial management staff, (ii) appointing and training more MOH staff before the grant effectiveness date, (iii) training all project-relevant staff on ADB's requirements, (iv) creating a dedicated budget code for the project and ensuring timely allocation of project funds, (v) including the project in the annual internal audit plan and submitting quarterly internal audit reports to ADB, and (vi) engaging an audit consultant to support the internal audit of the project. In addition, to strengthen integrity measures, ADB, under its regional technical

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<sup>21</sup> Financial Analysis (accessible from the list of linked documents in Appendix 2).

assistance, will conduct trainings on integrity measures.<sup>22</sup> ADB's assessment concluded that, given the risk mitigation measures and the implementation of the financial management action plan, the financial management systems are acceptable for the proposed project.

## E. Poverty, Social, and Gender

35. **Poverty and social considerations.** The nationwide COVID-19 vaccination program will ensure the efficient delivery of vaccines to the entire eligible population, including disadvantaged segments and especially income-poor communities, people with disabilities, migrant workers, and residents of geographically remote islands. The administration of additional doses of vaccine will help reduce the impact of the pandemic and allow a rapid recovery of employment and business, particularly in tourism and food-related industries, which had the highest proportion of economically displaced people. The project-supported procurement and deployment of speed boats and vans, and the construction of a new central vaccine cold storage facility will contribute to improving Maldives' capacity for delivering immunization services across the country, including in remote areas.

36. **Gender.** The project is categorized *effective gender mainstreaming*. The impacts of COVID-19 affected women disproportionately (para. 8). The current cold storage facility is in an old and dilapidated government building with no toilets and no GESI-responsive features.<sup>23</sup> While data systems are in place, MOH recognizes the need to enhance their coverage, consistency, and degrees of disaggregation (e.g., age, sex, location, comorbidity conditions, nationality) to ensure the full vaccination of the eligible population and improve women's access to essential care needs (maternal, sexual, and reproductive health care). Capacity building of health care workers will benefit women in particular because they account for 70% of the health care workforce.<sup>24</sup> A GESI action plan has been prepared to ensure that (i) the new cold storage facility incorporates GESI-responsive designs (separate toilets based on the staff's gender ratio, child daycare and lactation rooms, and access and assistive technology for people with disabilities); (ii) data disaggregated by sex, age, location, comorbidity, and nationality are collected, collated, and reported to inform the EPI and COVID-19 vaccination; and (iii) women (70%) are recruited and trained to provide the technical skills required for the EPI and COVID-19 vaccination. A GESI focal person will be engaged to support the timely and effective implementation of the GESI action plan, and the documentation of GESI results in the reports to be submitted to ADB.

## F. Safeguards

37. In compliance with ADB's Safeguard Policy Statement (2009), the project's safeguard categories are as follows.<sup>25</sup>

38. **Environment (category B).** An initial environmental examination (IEE) was prepared for a new cold storage facility based on a preliminary design and will be updated once the detailed design is being done. The environmental impacts of the project include standard construction-

<sup>22</sup> ADB. 2018. [Regional: Capacity Building on Integrity](#). Manila.

<sup>23</sup> The current temporary facility is in a dilapidated 2-story government building that is due for demolition. It does not have toilets; hence, staff need to walk to the next public building to use common toilets. Currently, the EPI staff handling the facility comprises 2 women. The facility also has 1 male security guard and 1 male UNICEF consultant who is currently providing technical support to the EPI team.

<sup>24</sup> In 2020, MOH reported that Maldives had a total of 6,328 health workers, of whom 4,446 (70%) were women and 1,882 (30%) were men. The total includes medical doctors and specialists—369 women (34%) and 720 men (66%); nurses—2,655 women (89%) and 327 men (11%); and allied health professionals such as community health professionals, dentists, and pharmacy professionals—1,422 women (63%) and 835 (37%) men.

<sup>25</sup> ADB. [Safeguard Categories](#).

related impacts such as a temporary increase in noise levels; air, soil, and water pollution risks; and site-specific health and safety risks to workers. Waste generation and health and safety risks during operations are also identified as project impacts. Mitigation measures in line with national requirements and international good practice have been set out in an environmental management plan. A national environmental clearance will be obtained, and all applicable local environmental requirements will be met before the works start. Meaningful consultations with stakeholders were held, and will continue to be held, in accordance with national COVID-19 health and safety protocols. The IEE was disclosed on the websites of ADB and MOH. MOH will locally disclose the IEE and establish a grievance redress mechanism. MOH's capacity to manage safeguards during implementation will be strengthened with training to be provided through technical assistance and with consulting support. MOH will appoint an environment and social safeguards focal person in the PMU to supervise and monitor project implementation. Environmental monitoring reports will be submitted to ADB semiannually during construction and annually during operations.

39. **Involuntary resettlement (category C).** The project involves neither acquisition of land nor involuntary restriction on land use or access and will not result in any physical or economic displacement. The land for the construction of a six-floor central vaccine cold storage facility is in Hulhumalé under the ownership of MOH. The available land area of about 1,916 square meters can well accommodate the proposed facility with a footprint of about 500 square meters. No communities are living nearby. The land is vacant, clearly marked and fenced, unencumbered, and government owned.

40. **Indigenous peoples (category C).** The project is not expected to have any indigenous peoples' impacts, as defined in the Safeguard Policy Statement.

## G. Summary of Risk Assessment and Risk Management Plan

41. Key risks and mitigating measures are summarized in Table 6 and described in detail in the risk assessment and risk management plan.<sup>26</sup>

**Table 6: Summary of Risks and Mitigating Measures**

<b>Risks</b>	<b>Mitigation Measures</b>
Weak financial management capacity and limited experience with ADB projects may result in delayed fund liquidation, and incomplete and inaccurate financial reports.	A dedicated project management unit will be established for the project, including qualified financial management staff for close monitoring of the project progress, and for preparing the financial reports under the supervision of MOH's chief accounts executive. All MOH staff involved will be trained on ADB's financial management and disbursement requirements.
Lack of project budget allocation may impede project implementation.	MOF will create a dedicated budget code for the project. Allocation will be timely and in accordance with the budget projection needs. The quarterly progress reports shall include comparisons of budget vs. actual expenditures and explain all significant variances.
Limited internal audit staff capacity may result in unsatisfactory project audits.	MOH will engage an audit consultant who will work under the direct supervision of MOH with the internal audit staff.
High susceptibility of project area to climate and disaster risks	The climate change assessment identified the risks, and adequate mitigation measures are being developed and will be incorporated into the new facility's design.

<sup>26</sup> Risk Assessment and Risk Management Plan (accessible from the list of linked documents in Appendix 2).

ADB = Asian Development Bank, MOF = Ministry of Finance, MOH = Ministry of Health.  
Source: ADB.

#### **IV. ASSURANCES**

42. The government has assured ADB that the implementation of the project shall conform to all applicable ADB requirements, including those concerning anticorruption measures, safeguards, gender, procurement, consulting services, financial management, and disbursement as described in detail in the PAM and loan documents. The government has agreed with ADB on certain covenants for the project, which are set forth in the draft grant agreement.

#### **V. RECOMMENDATION**

43. I am satisfied that the proposed grant would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the grant not exceeding \$10,000,000 to the Republic of Maldives from ADB's Special Funds resources (Asian Development Fund) for the Responsive COVID-19 Vaccination for Recovery Project under the Asia Pacific Vaccine Access Facility, on terms and conditions as are substantially in accordance with those set forth in the draft grant agreement presented to the Board.

Masatsugu Asakawa  
President

22 August 2022

## DESIGN AND MONITORING FRAMEWORK

[illegible]

Results Chain	Performance Indicators	Data Sources and Reporting Mechanisms	Risks and Critical Assumptions
	<p>(2022 baseline: 0) (OP 1.1.2 and OP 6.2)</p> <p>1c. By 2025, at least 2 refrigerated trucks and 2 vans operational in the Greater Malé area. (2022 baseline: 0) (OP 1.1.2 and 6.2)</p>		
2. Information management of the EPI strengthened for COVID-19 vaccination and routine immunization	<p>2a. By 2025, a health data center and a backup data center established. (2022 baseline: NA) (OP 1.1.2 and OP 2.3.2)</p> <p>2b. By 2025, at least 257 tablets for vaccination data entry deployed to all public health units and government hospitals across the country. (2022 baseline: 0) (OP 6.2)</p> <p>2c. Vaccination data disaggregated by sex, age, location, comorbidity conditions,<sup>e</sup> and nationality compiled and made available in the systems. (2022 baseline: NA) (OP 2.2.2)</p>	<p>2a. Health IT department data and EPI reports</p> <p>2b. EPI reports and PMU records</p> <p>2c. EPI reports</p>	
3. Human resource capacity of the EPI enhanced	<p>3a. By 2023, at least 60% of hired contractual staff (supporting central EPI program, national health data center, and MOH's biomedical services unit) are women.<sup>f</sup> (2022 baseline: 0%) (OP 2.1)</p> <p>3b. By 2025, at least 75% of the EPI delivery staff (70% of them women) with increased skills in key vaccination-related technical areas.<sup>g</sup> (2022 baseline: 0) (OP 2.3.1)</p>	<p>3a. Staff's feedback survey</p> <p>3b. PMU records</p>	
<b>Key Activities with Milestones</b> <b>1. Capacity of vaccine storage and transport system increased</b> 1.1 Procure and deploy 2 vans and 7 speed boats (by Q1 2023) 1.2 Deliver and deploy 2 refrigerated trucks to new building (by Q4 2024)			



1.3 Complete the design of the new central vaccine cold storage facility, which incorporates GESI-responsive and climate-resilience features (by Q2 2023)
1.4 Construct the new central vaccine cold storage facility (by Q4 2024)
<b>2. Information management of the EPI strengthened for COVID-19 vaccination and routine immunization</b>
2.1 Award contracts for the procurement and installation of new servers, IT equipment, and a 30-kilovolt-ampere generator for the server room (Q1 2023)
2.2 Procure mobile devices for public health units on islands and atolls as well as regional hospitals (Q1 2023)
2.3 Ensure that the software-based wide area network is functional across MOH, regions, atolls, and islands (Q1 2024)
2.4 Ensure that the videoconferencing facility is functional across MOH, regions, atolls, and islands (Q4 2023)
<b>3. Human resource capacity of the EPI enhanced</b>
3.1 Establish the PMU and recruit a basic staff contingent (5 full-time staff) (Q4 2022)
3.2 Hire a human resource management consultant for the PMU (Q4 2022)
3.3 Initiate a specialized training program for newly recruited permanent staff of the EPI, national health data center, and biomedical services unit (Q1 2023) <sup>h</sup>
<b>Project Management Activities</b>
Prepare and submit annual progress reports (Q4 2022 onward)
Prepare and submit quarterly progress reports (Q4 2022 onward)
Submit annual audited project financial statements (Q4 2022 onward)
Prepare project completion report (Q3 2025)
<b>Inputs</b>
Asian Development Bank: \$10.00 million (Asian Development Fund grant)
Government: \$0.77 million

A = assumption, COVID-19 = coronavirus disease, EPI = Expanded Program on Immunization, GESI = gender equality and social inclusion, IT = information technology, MOH = Ministry of Health, MVR = Maldivian rufiyaa, NA = not applicable, OP = operational priority, PMU = project management unit, Q = quarter, R = risk, UNICEF = United Nations Children's Fund, WHO = World Health Organization.

<sup>a</sup> MOH. 2022. *National COVID-19 Deployment and Vaccination Plan (2.0)*. Malé; and Government of Maldives. 2018. *Strategic Action Plan: 2019–2023*. Malé.

<sup>b</sup> As the vaccine transportation in 2021 significantly relied on private sector and cost gurad support at no cost, the baseline is calculated based on the estimated number provided by the MOH which was adjusted according to the average transportation cost for outreach vaccination per dose provided in the UNICEF report (UNICEF. 2022. [Costs and predicted financing gap to deliver COVID-19 vaccines in 133 low- and middle-income countries](#). New York.)

<sup>c</sup> GESI-responsive features will include (i) separate toilets and changing facilities for men and women based on the current gender ratio of EPI staff, (ii) child daycare and lactation rooms, (iii) ramps, (iv) lifts, and (v) curb cuts for wheelchair access. The requirements for GESI-responsive features will be included in the specifications of the design and supervision contract.

<sup>d</sup> "6 regions" refers to the jurisdictions of 6 regional hospitals, i.e., Gan Regional Hospital, Hithadhoo Regional Hospital, Kulhudhuffushi Regional Hospital, Mulee Regional Hospital, Thiradhoo Regional Hospital, and Ungooaaruu Regional Hospital.

<sup>e</sup> Comorbidity defines the simultaneous presence of two chronic diseases or conditions in people, such as cancer, diabetes mellitus, heart disease, stroke, obesity (body mass index above 40, immunocompromised patients, stage 3 and 4 kidney disease, chronic liver disease – cirrhosis, thalassemia (sickle cell) disease, and those under treatment (any case currently being treated or having received treatment within the last year). The comorbidity disaggregation function will only be available for COVID-19 vaccination data.

<sup>f</sup> There will be 8 new hires, 5 of them women. The training programs will be identified at project start; candidates for short-term training to come from both central and regional programs.

<sup>g</sup> The 70% target is based on MOH's 2020 report, which indicated that Maldives had a total of 6,328 health workers—4,446 women (70%) and 1,882 men (30%). Technical areas include the design, implementation, and monitoring of the COVID-19 booster and pediatrics vaccination campaign and the EPI; vaccine cold chain management; biomedical waste management; and vaccine risk communication

<sup>h</sup> Specialized training program may include but will not be limited to long-term (1–2 years) master's or postgraduate diploma degree training on vaccine supply chain management, vaccinology and immunotherapeutic, health information management, and biomedical engineering. Such training will be provided to 8 newly recruited permanent staff of the EPI, the national health data center, and the biomedical service unit of MOH—i.e., senior computer

programmer, computer programmer, statistical officer, EPI public health program officer for adverse events following immunization, EPI program cold chain officer, EPI program data coordinator, EPI program data officer, and biomedical engineer. A detailed training program will be developed during project implementation in consultation with key technical development partners in the health sector, such as WHO and UNICEF.

**Contribution to Strategy 2030 Operational Priorities**

Expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2).

Source: Asian Development Bank.

**LIST OF LINKED DOCUMENTS**

<http://www.adb.org/Documents/RRPs/?id=55086-001-2>

1. Grant Agreement
2. Vaccine Needs and Health Sector Assessment
3. Project Administration Manual
4. Financial Analysis
5. Economic Analysis
6. Country Economic Indicators
7. Summary Poverty Reduction and Social Strategy
8. Risk Assessment and Risk Management Plan
9. Contribution to Strategy 2030 Operational Priorities
10. Climate Change Assessment
11. Gender Equality and Social Inclusion Action Plan
12. Initial Environmental Examination
13. Development Coordination
14. Country National Vaccination Allocation Plan
15. Financial Management Assessment
16. Strategic Procurement Planning Report