



1. Operation Information

Operation ID

P163939

Operation Name

Maldives CAT DDO and PEF

Country

Maldives

Practice Area (Lead)

Urban, Resilience and Land

Non-Programmatic DPF

L/C/TF Number(s)

IDA-64540, IDA-D4930, TF-B0395

Closing Date (Original)

30-Sep-2022

Total Financing (USD)

10,976,568.91

Bank Approval Date

01-Jul-2019

Closing Date (Actual)

30-Sep-2022

IBRD/IDA (USD)

Co-financing (USD)

Original Commitment

10,952,380.95

952,380.95

Revised Commitment

10,952,380.95

952,380.95

Actual

10,976,568.91

952,380.95

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2. Program Objectives and Pillars/Policy Areas

a. Objectives

The Program Development Objective (PDO) was stated in the Financial Agreement and Program Document (PD) as: "To enhance the Maldives' financial capacity to effectively manage the human, physical and fiscal impact of climate change, natural disasters and disease outbreaks". The PDO did not change during program implementation. The PDO, as stated, is also identified in the program's Implementation Completion and Results Report (ICR). However, in the ICR, the team dropped "financial" from "financial capacity" in the PDO



and stated that it is because financial capacity relates to the nature of the operation (Deferred Drawdown Option for Catastrophe risks (Cat-DDO) and Pandemic Emergency Financing Facility (PEF)) and not to the policy matrix. Instead, authors identified a de facto PDO, which is “to enhance the Maldives’ capacity to effectively manage the human, physical and fiscal impact of climate change, natural disasters and disease outbreaks”, and breaks this down into nine separate sub-PDOs used to assess the relevance of PAs and RIs in the ICR.

The ICRR review agrees with the ICR approach to use the de facto PDO, which is “to enhance the Maldives’ capacity to effectively manage the human, physical and fiscal impact of climate change, natural disasters and disease outbreaks” but for a different reason. Rather than dropping “financial” from financial capacity because it relates to Cat-DDO and PEF, the review believes that financial capacity is redundant since the “management of fiscal impacts” is covered by the PDO, which covers financial capacity in a more targeted and, for the operation, relevant way. “Enhancing capacity” is more relevant to the PAs than limiting the PDO to just “financial capacity”. For the purpose of the ICRR, the PDO is divided into two sub-PDOs that separate impacts of climate change and natural disasters and impacts of disease outbreaks. This division corresponds well to the pillars and PAs of the operation. As such, the sub-objectives used to evaluate the operation in the ICRR are taken to be:

Objective 1: To enhance the Maldives’ capacity to effectively manage the human, physical and fiscal impact of climate change and natural disasters.

Objective 2: To enhance the Maldives’ capacity to effectively manage the human, physical and fiscal impact of disease outbreaks.

b. Pillars/Policy Areas

The program had three pillars at appraisal and closing. Pillars A and B are linked to the achievement of Objective 1 and pillar C is linked to achievement of Objective 2:

- Pillar A: Enhancing the institutional and regulatory framework to manage the impact of climate and disaster risk (2 prior actions)
- Pillar B: Integrating climate and disaster risk reduction in key sectors (2 prior actions)
- Pillar C: Enhancing the capacity to manage human health crisis preparedness and response (2 prior actions)

c. Comments on Program Cost, Financing and Dates

The program included a US\$ 10 million IDA Cat-DDO and US\$ 952,381 in a Trust Fund grant from the Pandemic Emergency Financing Facility. The operation was approved on November 7, 2019. The Cat-DDO in the amount of US\$ 10,024,188 (difference caused by exchange rate fluctuations) was disbursed on March 24, 2020. The PEF grant, in the amount of US\$ 952,381, was disbursed on June 1, 2020. Both disbursements were activated after requests from the government to respond to the global public health emergency caused by the outbreak of COVID-19 in 2020.



3. Relevance of Design

a. Relevance of Objectives

Country context

The Maldives is highly vulnerable to natural disasters and climate change. The Maldives is one of the world's most vulnerable countries due to its low elevation, making it susceptible to sea-level rise and extreme weather events like monsoonal flooding, coastal erosion, salt-water intrusion, and even earthquakes and drought. About 40% of its population lives in the densely populated capital, Male, while the rest are dispersed across its extensive archipelago. These geographical and environmental challenges threaten lives and livelihoods, as well as economic growth. It is estimated that climate change can lead to annual economic losses exceeding 12% of GDP by 2100. Additionally, the country's limited financial resources hinder its ability to implement development plans, enhance resilience, and recover from disasters effectively.

The Maldives is highly exposed to public health threats. Attracting an average of 1.25 million tourists annually between 2014 and 2017, along with a substantial number of international workers, the Maldives is at constant risk of importing new diseases or seeing the re-emergence of previously controlled ones. In 2017, Zika cases were reported, prompting a travel advisory from the US Center for Disease Control. The country, though malaria-free, faces risks from Aedes mosquitoes, which are vectors for Dengue, Zika, and Chikungunya. These diseases are sensitive to climate change, which affects mosquito populations. A 2017 Joint External Evaluation (JEE) done by the World Health Organization's (WHO) International Health Regulations (IHR) found that there was limited government capacity to deal with severe disease outbreaks and the Government of Maldives (GoM) committed to addressing this issue.

Government's reform program

During the last decade, the GoM has shifted from a reactive to a proactive approach to managing risks associated with climate change and natural disasters. The National Disaster Management Center (NDMC) (Note: In 2018, the National Disaster Management Authority (NDMA) took over the NDMC's mandate), an entity established in the aftermath of the 2004 tsunami, has over time moved from coordinating relief efforts to a more holistic model of mainstreaming disaster risk reduction (DRR) and preparedness in the national development agenda. The more comprehensive approach is supported by national plans and policies. For example, The Strategic National Action Plan (SNAP) of 2011 was the world's first national action plan that integrates disaster risk reduction (DRR) and climate change adaptation (CCA) and was adopted to promote collaboration among DRR and climate change adaptation stakeholders to mainstream Disaster Risk Management (DRM) across key sectors. The Disaster Management Act of 2015 is the cornerstone of the GoM's DRM program, led by NDMA, and was followed by a series of policies and plans that all support a more comprehensive approach to manage climate and disaster risk. These include the (i) the 7th National Disaster Management Plan (NDMP); (ii) the National Emergency Operations Plan (NEOP); (iii) the second National Environmental Action Plan (NEAP); (iv) the National Adaptation Programme of Action (NAPA) and Nationally Determined Contributions (NDC) Implementation Plan; (v) the Climate Change Policy Framework 2015; (vi) the Health Master Plan 2016-2025; (vii) the Construction Act 2017; and (viii) the Government's Telecom Policy that emphasizes on an Emergency Communication Plan. The DRM Program was originally based on the Hyogo Framework for Action, and later aligned with the 2015-2030 Sendai Framework for DRR. The Program also adhered to the country's climate change agenda and its commitments before the United Nations Framework Convention on Climate Change, including the Paris Agreement.



The Health Protection Agency (HPA) of the Ministry of Health (MoH), alongside NDMA are the main government agencies implicated in health emergency response. Recognizing the country's increased vulnerability to communicable diseases and vector-borne outbreaks, enhancing "the response of the health system in emergencies" was identified by GoM as one of 10 National Health Policy Goals. The GoM also committed to addressing the capacity gaps in managing disease outbreaks, identified in the JEE, including weak coordination mechanisms in health-related emergency response and a need for updating the pandemic emergency response plan.

World Bank priorities

Strengthening the Maldives' ability to manage the impacts of climate change, natural disasters, and disease outbreaks is essential for the nation's development and poverty reduction goals and aligned with WB priorities. As a small island nation vulnerable to the effects of climate change, enhancing resilience in the face of potential disasters and pandemics is vital for protecting the livelihoods of the Maldivian people, particularly those in vulnerable communities. This objective is also linked to sustaining key economic sectors like tourism, which is a driver of the country's economy and a source of employment and income for its population.

The importance of this challenge and PDO is reflected in key WB country diagnostics and partnership frameworks. The 2015 Systematic Country Diagnostic Priority Area 3 and Objective 3 in the Country Partnership Framework (CPF) identified the capacity to manage external shocks as a precondition for the country's development model. In the CPF's revision in the Performance and Learning Review (PLR) in 2018, the relevance of the PDO was further enforced, in particular under Focus Area 2 – "strengthening Maldives' preparedness and resilience to climate change, natural disasters, and other shocks", under which the use of CAT-DDO and PEF was proposed, and Focus Area 3 – "improving fiscal sustainability". The PDO remains highly relevant in updated SCD (2021) and CPF (FY23-FY27).

b. Relevance of Prior Actions

Rationale

There were 3 pillars and 6 prior actions.

Objective 1: To enhance the Maldives' capacity to effectively manage the human, physical and fiscal impact of climate change and natural disasters:

Pillar A: Enhancing the institutional and regulatory framework to manage the impact of climate and disaster risk: This pillar is focused on providing the regulatory and institutional basis to increase the government's capacity to ensure the protection of the country's natural and built-up environment from disasters (PD, p.22). It included two PAs.

PA1: Establishment of the National Disaster Management Authority (NDMA) which will focus on mainstreaming disaster risk reduction in national planning, processes, standards and policies.

In response to the 2004 Indian Ocean Tsunami, the Maldives government established the National Disaster Management Center (NDMC) focusing on emergency response. However, its scope, authority, and legal framework were limited. As a result of the PA, the NDMC became an official government authority and was renamed the National Disaster Management Authority (NDMA) in line with the Disaster Management Act of



2015. The shift was accredited to the increased importance of disaster preparedness and the NDMC in the eyes of the government thanks to the engagement with the World Bank on the DPF. In becoming an authority, it was provided with a stronger operational setup and clearer and broader mandate for emergency management, disaster prevention, and risk reduction across government sectors. This PA is in line with the government strategy to apply a holistic approach to risk management. The analytical underpinnings for the PA include the (i) The Sendai Framework for Disaster Risk Reduction 2015 - 2030 by United Nations (2015), (ii) Natural Hazards, UnNatural Disasters. The Economics of Effective Prevention by the World Bank and United Nations (2010), (iii) Financial Protection against Natural Disasters: An Operational Framework for Disaster Risk Financing and Insurance. (2014) by the World Bank. **PA 1 Relevance Rating: Satisfactory**

PA2: Enactment of the Building Code to ensure buildings are safe, healthy and durable for the people who use them.

The construction sector in the Maldives has been underregulated due to the lack of legal enforcement of the 2008 building code. As a result of this PA, the building code was made part of the regulatory framework, ensuring building safety during disasters and emergencies, e.g., windstorms and earthquakes. This legal change made the code binding for all multi-story constructions, enabling more effective management of the impacts of climate change and natural disasters. The analytical foundation for this prior action came from the (i) Disaster Risk Profile for Maldives by UNDP (2006), which provided key findings following the 2004 Tsunami to inform development planning including safe construction practices and (ii) Investing in Urban Resilience (2015) by the World Bank. **PA 2 Relevance Rating: Satisfactory**

Pillar B: Integrating climate and disaster risk reduction in key sectors.

PA3: Approval and adoption of the Nationally Determined Contribution (NDC) Implementation Plan.

The Maldives ratified the Paris Agreement in 2016 and defined their NDCs. The NDCs embody the efforts by each country to reduce national emissions and adapt to the impacts of climate change. The government defined an implementation plan for its NDCs, which outlines priority areas, responsible agencies, timelines, and required assistance and an instrument was put in place to provide details on the commitments and enable GoM to monitor and evaluate implementation progress. The analytical underpinnings include (i) "National Adaptation Plan of Action (2006) by GoM, (ii) Maldives Climate Change Policy Framework (2015) by Ministry of Environment and Energy (MEE), (iii) Maldives' Intended NDC in Paris (2015) by MEE. While this PA is relevant to the achievement of Objective 1, it is not clearly linked to the engagement of the DPF since the NDC implementation plan would have been adopted regardless of this operation. **PA 3 Relevance Rating: Moderately Satisfactory**

PA4: Drafting of the Water and Sewerage Regulations, establishing the legal framework to govern the quality and assurance of the Water Supply and Sanitation (WSS) services from project design to management and operation of systems, and to optimize these services towards the benefit of the island communities.

The Maldives, heavily reliant on groundwater, rainwater and desalination due to a lack of rivers, often faced significant water shortages, worsened by climate change. As such, WSS services are essential for the nation's economic and social development but the legislative framework for WSS was inadequate. As a result of the PA, the Water and Sewerage Act (8/2020) was approved, establishing a comprehensive regulatory framework for water resource management and sanitation services. While this regulation did not directly strengthen the climate resilience of the water sector, it did lay the legal foundations for the sector needed to further improve



water management and delivery. The analytical underpinnings of the PA are (i) The National Water and Sewerage Policy (2017) by GoM and (ii) High and Dry: Climate Change, Water, and the Economy (2016) by World Bank. **PA 4 Relevance Rating: Moderately Satisfactory**

Objective 2: To enhance the Maldives' capacity to effectively manage the human, physical, and fiscal impact of disease outbreaks:

Pillar C: Enhancing the capacity to manage human health crisis preparedness and response.

This pillar focused on the government's preparedness and response capacity as it pertains public health threats. The PAs focus on addressing gaps identified in the JEE of IHR Core Capacities (2017), which identified the need to (i) revisit the pandemic emergency response plan established in 2014 and (ii) establish a national health emergency operation center to better manage public health threats.

PA5: Development and endorsement of a Health Emergency Operations Plan (HEOP) that increases the government's preparedness and response capacities for health crises.

The 2017 JEE of IHR capacities by WHO identified areas of strengthening, including updating the pandemic emergency response plan and coordination mechanisms. As a result of the PA and in line with the JEE recommendations, GoM prepared the HEOP, a unified framework for managing public health emergencies and disaster-related health incidents, contributing to the public health and medical care aspects of the National Emergency Operation Plan (NEOP), NDMA's emergency management guide. The analytical foundation of this PA included (i) The JEE of IHR Core capacities in the Republic of Maldives (2017) by WHO, and (ii) A strategic framework for emergency preparedness (2017) by WHO. **PA 5 Relevance Rating: Satisfactory**

PA6: Establishment of a Health Emergency Operation Center (HEOC) at the Ministry of Health (MoH).

The JEE also revealed the Maldives' limited capacity to handle health emergencies, recommending the establishment of a national HEOC. Subsequently, as a result of the PA, the government established a HEOC as a coordination center for public health emergencies. The HEOP provided guidelines for the HEOC's activation and management to improve health emergency responses. **PA 6 Relevance Rating: Satisfactory**

The causal links between the prior actions, the intended program results and objectives were largely clear and logical. Strengthening the mandate of NDMA, building code enforcement, NDC implementation, and water and sewerage regulation will help the GoM manage physical, human, and fiscal impacts of climate change and natural disasters across different government sectors. Establishing and strengthening the health emergency plans while also supporting complementarity and coordination across agencies involved in emergency response are important steps to increase GoM's capacity to respond to health crises, and these actions are clearly linked to the achievement of Objective 2. In some cases, such as PA3, the link between the DPF and the PA was not clearly defined, and in the case of PA4, the link to the objective was highly indirect since the regulation did not focus on climate resilience specifically. Overall, there is sufficient evidence on how the program has supported the management of human and physical impacts, but there is a lack of evidence on how the fiscal impact are managed. Fiscal resilience is partly supported by the use of Cat-DDO and PEF in the DPF, but there is no PA explicitly supporting fiscal management of shocks.

Overall, the PAs address key constraints to achieve objectives and are based on sound analytical underpinnings. As such, the relevance of PAs is rated Satisfactory, with some shortcomings as noted immediate above.



Rating

Satisfactory

4. Relevance of Results Indicators

Rationale

Objective 1: To enhance the Maldives' capacity to effectively manage the human, physical and fiscal impact of climate change and natural disasters:

Progress towards achieving this objective was measured through five results indicators, linked to four prior actions:

- RI1: National Disaster Management Authority (NDMA) reports on NEOP readiness and RI2: The drafting of National Disaster Management Plan (NDMP) are linked to PA1: NDMA,
- RI3: The enforcement of the Building Code through the issuance of compliance documents is linked to PA2: Building Code,
- RI4: Expanded meteorological observation network with Automated Weather Stations (AWS) to support the Early Warning System (EWS) linked to PA3: NDC Implementation Plan,
- RI5: Coverage of water services, and RI6: Coverage of sewerage services are linked to PA4: Water and Sewerage Regulations.

RI1 and RI2 were highly relevant since the transition of NDMC to an official authority (PA1) provided the agency with the authority to issue those type of reports and plans. They were rated Satisfactory.

RI3 was relevant and aligned with PA2. However, the use of the word “issued” in reference to the completion of the compliance document caused confusion since it means distributed. The team intended to use the word “drafted”. As such, the team explained that the target was difficult to achieve in the given timeframe due to the complex and lengthy process of issuing a compliance document on building codes. However, having something “drafting” is not an ambitious target. As such, RI3 was rated Moderately Unsatisfactory.

RI4 is linked to the impact of PA3 since expanding the EWS is one of the commitments in the NDC implementation plan, and according to the program team, it was the only commitment that was measurable quantitatively. There were a number of challenges with this indicator. First, the indicator only focused on the expansion of the system and did not consider the quality-of-service provision by not specifying whether the stations were functioning or not (despite the shortcomings of RI, this data was captured in the ICR). As such, the baseline data used did not reflect actual service delivery, just the number of existing stations. Second, since this indicator was directly drawn from the NDC implementation plan, and there was no relationship between the DPF and the government counterparts responsible for the achievement of this indicator. While the indicator is relevant for the achievement of Objective 1 in a general way, the RI is disconnected from the engagement of the DPF. Due to these deficiencies, RI4 is rated Moderately Unsatisfactory.



RI5 and RI6 monitor the expansion of WSS access without capturing the reliability of service, especially in relation to the prevalence of water outages, which was identified as a major challenge and is more relevant to the achievement of Objective 1. While expanded access is essential for improving human well-being, it could very well increase the risk of water outages unless water resources and infrastructure are well managed. PA4 may have provided the conditions for improved WRM, but the indicator does not measure whether or how much of the expanded access is sourced from well-managed water sources and/or through climate resilient WSS infrastructure. Finally, since the agencies responsible for delivering WSS infrastructure were outside the scope of this DPF, attribution of the achievements of RI5 and RI6 is difficult to link to the DPF. As a result, RI5 and RI6 are rated Moderately Unsatisfactory.

Objective 2: To enhance the Maldives' capacity to effectively manage the human, physical, and fiscal impact of disease outbreaks:

Progress toward this objective was measured through two results indicators:

- RI7: Share of health workers trained on the implementation of the HEOP's gender-specific activities [Minimum Initial Service Package (MISP) for reproductive health (RH)] in crisis situations is linked to PA5: HEOP, and
- RI8: Number of simulation exercises on the activation and use of the HEOC carried out is linked to PA6:HEOC.

RI7 measures the impact of PA5, but the definition of the indicator (which health workers constituted a target of 100%) was not clearly explained in program documentation, leading to some issues during program implementation. Since the issue was resolved and the indicator otherwise was relevant for the achievement of Objective 2, it is rated Moderately Satisfactory. Relevance of RI8 was Satisfactory.

Table 1 – Relevance of Results Indicators and Results

RI	Associated PA	RI relevance	Baseline (units and dates)	Target (units and dates)	Actual value	Actual change in target relative to targeted change	RI achievement
De facto PDO: To enhance the Maldives' capacity to effectively manage the human, physical and fiscal impact of climate change, natural disasters and disease outbreaks.							
Pillar A: Enhancing the institutional and regulatory framework to manage the impact of climate and disaster risk.							
RI1: NDMA reports on NEOP readiness.	PA #1	S	Baseline (2019): 0 readiness reports prepared	Target (2022): 3 readiness reports prepared	Actual (2022): 3	100%	Substantial
RI2: The NDMP is drafted.		S	Baseline (2019): No, NSMP not drafted	Target (2022): Yes, NSMP drafted	Actual (2022): Yes	100%	Substantial



RI3: The Building Code has been enforced through the issuance of compliance documents.	PA #2	MU	Baseline (2019):0 compliance documents issued	Target (2022): 10 compliance documents issued	Actual (2022): 11	110%*	Modest
Pillar B: Integrating climate and disaster risk reduction in key sectors.							
RI4: EWS is supported with an expanded meteorological observation network with AWS.	PA #3	MU	Baseline (2019): 36 AWS	Target (2022): 50 AWS	Actual (2022): 22 functioning out of 43	50% **	Negligible
RI5: Water coverage	PA #4	MU	Baseline (2019): 51% covered by water service	Target (2022): 80% covered by water services	Actual (2022): 71%	69% change	Modest
RI6: Sewerage coverage		MU	Baseline (2019): 67% covered by sewerage services	Target (2022): 90% covered by sewerage services	Actual (2022): 81%	64% change	Modest
Pillar C: Enhancing the capacity to manage human health crisis preparedness and response.							
RI7: Health workers have been trained on implementation of the HEOP's gender-specific activities in crisis situations.	PA #5	MS	Baseline (2019): 0% of health workers responsible for implementing the HEOP trained in MISP for RH	Target (2022): 100% of health workers responsible for implementing the HEOP trained in MISP for RH	Actual (2022): 100%	100%***	Substantial
RI8: Simulation exercises on the activation and use of the HEOC are carried out	PA #6	S	Baseline (2019): 0 simulation exercises realized	Target (2022): 3 Simulation exercises realized	Actual (2022): 4	133%	High
*Based on 11 <i>drafted</i> documents, not legally issued (see discussion on this in next section)							
**Based on # of newly constructed AWSs, not total number of functioning AWSs (due to lack of baseline data on functioning stations)							
***Total number of health workers trained were 248							



The overall rating of the relevance of results indicators is Moderately Satisfactory, based on the average RI ratings.

Rating

Moderately Satisfactory

5. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

Objective 1: To enhance the Maldives' capacity to effectively manage the human, physical and fiscal impact of climate change and natural disasters.

Rationale

Theory of Change

Overall, the prior actions (PAs) intended to achieve Objective 1 were causally and directly linked to the intended program results, which in turn signal whether the objective has been achieved. There is a clear and logical chain between the selected actions (i.e., the strengthening the mandate of NDMA, enforcement of the building code, and implementation of water and sewerage regulation) and enabling GoM to better manage the physical, human and fiscal impacts of climate change and natural disaster among various government sectors. PA4, however, may only be indirectly linked to achieving Objective 1 since the regulation did not focus specifically on climate resilience. PA3's linkage to the operation could have also been delineated more clearly. Finally, evidence is lacking on fiscal impact, while also noting that fiscal resilience is partly supported by the use of Cat-DDO and PEF.

Pillar A: Enhancing the institutional and regulatory framework to manage the impact of climate and disaster risk:

- NDMC became an official authority and changed its name to National Disaster Management Authority (NDMA) and was provided with a clear mandate and budget to lead emergency coordination. This contributed to the finalization of NEOP readiness reports because they now had the mandate to issue these types of documents.
- Three NEOP readiness reports were prepared by NDMA, covering health crises, hydrometeorological hazards, and terrorism. According to the ICR, these reports capture key analysis of the NEOP functionality in relation to listed crises and include lessons learned and recommendations that have been taken into account to improve NEOP (p.16).
- The NSMP was drafted to complement NEOP by covering all aspects of DRM, not only emergency preparedness.
- Building Code was enacted as per the Construction Act 2017.



- 11 compliance documents that will be used to enforce the Building Code were drafted. The remaining steps to issue the documents to make them legally binding are expected to take place in the course of 2024. Since the documents have not been issued, the achievement is deemed modest.

Pillar B: Integrating climate and disaster risk reduction in key sectors.

- An Implementation Plan for Maldives' Nationally Determined Contribution (NDC) was approved and adopted by GoM and communicated to the Paris Agreement. The Plan, developed by the Ministry of Environment and Energy, identifies 9 priority areas with potential for adaptation. These include coastal protection, safeguarding coral reef and its biodiversity, tourism, fisheries, early warning and systematic observation and cross cutting Issues.
- Seven automated weather stations were added to the EWS network, partially reaching the target of 14 new stations. The ICR states that in addition to the new ones, many of the older stations were replaced, contributing to improvement in quality rather than quantity, but didn't report any numbers on this. In addition, due to lack of Operation and Maintenance (O&M), only 22 of the 43 stations were operational at the time of completion, according to ICR (p.18). The achievement of the indicator was calculated based on existing stations and not the number of functioning stations since this data was not available at baseline, reaching a 50% achievement of target. However, the achievement rating was adjusted downward from modest to negligible due to the issues with this indicator described in the previous section.
- New Water and Sewerage Regulations were drafted, providing a legal framework governing the quality and assurance of the WSS services from program design to management and operation of systems. The regulation also aligned relevant agencies towards the common target of universal water access in the country.
- Water service coverage increased from 51% to 78% (71% at closing), partially achieving the target of 80%, significantly lowering the risk of emergency water provision. The government remains committed to reaching the target. The achievement rating was adjusted downward from Substantial to Modest due to the identified issues with this indicator, discussed in the previous section.
- Sewerage service coverage increased from 67% to 85.5% (81% at closing), partially achieving the target of 90%. According to the ICR, the expansion of the sewerage system has contributed to a reduction in contamination on the islands. However, since the Maldives' sewerage system discharges into the deep sea, this contamination will most likely increase until water treatment is installed. The government remains committed to reaching the target. The achievement rating was adjusted downward from Substantial to Modest due to the identified issues with this indicator, discussed in the previous section.

The rating of the achievement of Objective 1 is Moderately Satisfactory, given the moderate shortcomings in the achievement of some indicators.

Rating

Moderately Satisfactory

OBJECTIVE 2

Objective



Objective 2: To enhance the Maldives' capacity to effectively manage the human, physical and fiscal impact of disease outbreaks.

Rationale

Theory of Change

The prior actions for achieving Objective 2 are causally linked to the targeted results, which, as measured through the results indicators, adequately signal the achievement of the objective. Specifically, the establishment and strengthening of the health emergency plans, while also supporting complementarity and coordination across agencies involved in emergency response, were the salient actions that were expected to lead directly to an increase in GoM's capacity to respond to health crises.

Pillar C: Enhancing the capacity to manage human health crisis preparedness and response.

- A Health Emergency Operations Plan (HEOP) was developed and endorsed by GoM, specifying the processes and procedures of disaster and health emergency response.
- 248 health care workers were trained on the minimum initial service package for reproductive health to enabled improved provision of reproductive health services in crisis situations, in line with HEOP implementation. This included all the staff requiring the training, which was defined during program implementation, reaching the target of 100%. The training supported the prenatal care provided to pregnant women during the COVID-19 pandemic. Due to the lack of clear definition of the RI7, the rating is downrated from High to Substantial.
- Four simulation exercises were carried out, exceeding the target of three. The exercises carried out were in direct preparation for the COVID-19 pandemic and enabled government to stress test plans and procedures prior to the global outbreak.

The rating of the achievement of Objective 2 is Satisfactory because all indicators were achieved substantially or higher.

Rating

Satisfactory

Overall Achievement of Objectives (Efficacy)

Rationale

Four out of the eight targets were achieved, and the remainder made modest to substantial progress towards targets. However, due to challenges in the design and relevance of five of the results indicators, their achievement ratings were downgraded. Achievement towards Objective 1 was rated Moderately Satisfactory with two RI achievements rated substantial, three modest and one negligible and the achievement of Objective 2 was rated Satisfactory with one RI achievement rated substantial and one high. The overall average efficacy rating is Moderately Satisfactory. There were shortcomings in providing evidence on improved management of fiscal impacts of climate change, disasters, and disease outbreaks (a part of the PDO). None of the RIs captured



impacts related to fiscal risk management and program documents did not explain well how this aspect of the PDO was strengthened. It can be argued that the use of the Cat-DDO and PEF instruments strengthened financial resilience, but since these were one-off drawdown options, their contribution to financial resilience is limited. In sum, due to the lack of evidence on fiscal resilience, the overall efficacy was rated Moderately Satisfactory.

Overall Efficacy Rating

Moderately Satisfactory

6. Outcome

Rationale

The overall outcome rating is Moderately Satisfactory. Some of the RIs had issues that affected their relevance, resulting in a Moderately Satisfactory relevance rating and also led to downgrading of the associated achievement rating of those RIs. The overall Efficacy rating was Moderately Satisfactory, due to the lack of evidence on how the management of fiscal impact has been improved.

a. Rating

Moderately Satisfactory

7. Risk to Development Outcome

There is a moderate risk to development outcomes. The COVID-19 crisis further illustrated to the government the importance of preparedness and response capacity. The experience solidified the capacity strengthened in emergency preparedness and inter-agency coordination, supported under this operation, as well as the *COVID-19 Strategic Preparedness and Response Project*. Another ongoing project, *The Maldives Urban Development and Resilience Project*, covers building code enforcement support, building on the progress made under PA2.

Lack of maintenance of the automated weather stations undermined progress made under RI4 (PA3) and continues to be a challenge. The ICR (p.26) also highlights the risk of weak operation and maintenance to sustain the expanded water and sewerage coverage, potentially undermining progress made under RI5 and RI6 (PA4). The lack of wastewater treatment is another threat to development outcome.

8. Assessment of Bank Performance

a. Bank Performance – Design

Rationale



Alignment with government priorities and country needs was high, the policy package was relevant and timely. The combination of DRM and health sectors was relevant and innovative and made the country better placed as it was forced to tackle the COVID-19 crisis during program implementation. The operation design built on lessons learned from previous experiences, as well as a series of relevant analytical pieces. Partners and stakeholder engagement was sufficient.

The program document would have greatly benefited from a stated theory of change, including constraints addressed by the PAs, underlying assumptions and link to selected results indicators. The logic of the program relies on a few strong assumptions that were not adequately discussed in the PD, i.e., the NDC implementation plan will support EWS expansion, and water and sewerage regulation will address drought related water outages and support expansion of the WSS network. The links are not entirely clear and would have benefited from a discussion around existing constraints.

The PDO was overly complex, as stated in the ICR (p.24), with three types of impacts and three causes of impacts. All the impacts were not relevant for all causes of impacts, e.g., physical impacts are not caused by disease outbreaks. The link between PAs and RIs was not entirely clear in some cases, as discussed in previous sections. The lack of clarity around the RIs also caused a few misunderstandings on how the indicators were to be measured, e.g., what “issued” means in the context of completing building code compliance documents in RI3, how to count the automated weather stations that replaced older ones in RI4 and what constituted 100% of health workers to receive training in RI7. In the TTL interview, they explained that many RIs were decided at the very last minute after the operation was initially postponed for more than a year, rendering the original policy framework outdated. This explains some of the oversight on the RIs. The team also prioritized indicators that were of quantitative nature over perhaps more relevant qualitative indicators. For example, the expansion of the AWS network and the % of the population with access to water and sanitation were indicators picked because of their quantifiable nature. However, the institutions in charge of delivering the investments needed to achieve the targets of those indicators were outside the scope of the operation, and hence, attribution was not clear.

Macro and institutional risks were correctly identified and discussed. However, the environmental risk associated with sewerage discharge into the deep sea was not discussed in PD.

Rating

Moderately Unsatisfactory

b. Bank Performance – Implementation

Rationale

The Bank team provided ongoing monitoring and candid documentation, despite challenges due to ongoing COVID-19 pandemic. Travel restrictions were imposed during program implementation. Nonetheless, four missions were carried out, three of them virtual and the team connected with all implicated agencies. The swift response to the COVID-19 crisis, including Cat-DDO and PEF activations was a testament of the close communication and continuous support provided by the Bank team to GoM. Seven ISRs were produced, that



covered progress and issues in a candid way. Issues that came up during implementation, such as the issues regarding results indicators were solved in an adequate way, documented and reported in the ISRs.

Rating

Satisfactory

c. Overall Bank Performance

Rationale

Overall, Bank performance was Moderately Satisfactory. The DPF was a relevant and impactful operation. However, there were shortcomings with the results framework which negatively affected the rating. Some of the challenges at design were addressed during implementation. For other challenges, such as the AWS O&M challenge, are being picked up by other Bank engagements.

Overall Bank Performance Rating

Moderately Satisfactory

9. Other Impacts

a. Social and Poverty

By strengthening preparedness and crisis response services that poor people can access in connection to a disaster event, the operation has had positive social benefits. This was evidenced by the successful response to COVID-19 which performed better than in comparable countries (ICR, p.15). In addition, it is likely that expanded access to water and sewerage services has had positive social impacts, particularly benefitting the poorest segments of the population by improving water security and reducing contamination. However, as argued in this ICRR, it is not clear how this DPF contributed to the expansion of WSS.

b. Environmental

The expansion of the sewerage service has had a positive environmental impact by reducing land-based contamination. But since wastewater is partially dumped into the deep sea, the positive effects will be offset in the long run via increased ocean pollution. Finding options for wastewater treatment is a priority and the ICR reports that the GoM is currently looking at options for treatment plants adapted to the needs and conditions of each of the islands (p.19).

c. Gender



The focus on ensuring continued reproductive health services during crisis situations had positive impacts on women and girls. The operation contributed to successful delivery of sustained reproductive health services during the COVID-19 pandemic. Free family planning and contraceptives services were provided in all the islands and a dedicated team of care workers carried out daily checkups on COVID-positive pregnant women during their isolation period. However, gaps in service access remain an issue since the ICR reported that 40% of people requiring these services may not have received needed support (p. 20).

d. Other

The Cat-DDO and PEF enabled quick resource mobilization after the GoM declared state of emergency due to the COVID-19 crisis. The Cat-DDO withdrawal was processed one day after Bank received GoM's request for disbursement. Resources complemented government funds and were used in a cross-agency national response to fund medical facilities for COVID-19 management, medical and personal protective equipment, among other things (ICR, p.21). Thanks to the setup of the operation, the Maldives was one of the first countries to receive emergency funding to respond to COVID-19 from the World Bank.

10. Quality of ICR

Rationale

The ICR effectively presented a coherent narrative with a logical flow. It included evidence that went beyond the M&E data, and interrogated formulations and definitions of the results framework that enabled a rich assessment of program achievement. The analysis within the ICR is candid and thorough, demonstrating a balanced interrogation of the evidence and effectively linking it to interventions and outcomes through a coherent results chain. The ICR puts forward a theory of change to support the analysis. The lessons learned section of the ICR is grounded in the evidence and findings, providing operationally relevant insights. In terms of adherence to guidelines, the report follows the prescribed ICR structure and methodology, focusing on essential information while avoiding overly descriptive content. This conciseness aids in the effectiveness of the self-evaluation process.

a. Rating

Substantial

11. Ratings

Ratings	ICR	IEG	Reason for Disagreement/Comments
Outcome	Moderately Satisfactory	Moderately Satisfactory	



Bank Performance	Moderately Satisfactory	Moderately Satisfactory
Relevance of Results Indicators	---	Moderately Satisfactory
Quality of ICR	---	Substantial

12. Lessons

The integration of DRM and health using Cat-DDO and PEF with health-related triggers and an integrated policy framework significantly enhanced health crisis preparedness in the Maldives. It was a strategy that was particularly effective during the COVID-19 pandemic. The successful alignment of the Cat-DDO and the PEF, was a key factor in this success. The approach, which combines financial support with strategic engagement on preparedness, has been replicated in Nepal, Honduras, and Bhutan. This integration has not only provided timely financial allocation in crisis times, but also contributed to strengthening and integrating their disaster and health emergency preparedness policies and institutional frameworks.

A Cat-DDO can help strengthen government interest in crisis preparedness. Moving from a reactive to a proactive approach to DRM saves lives and money. However, having governments invest in preparedness is not always easy since benefits are largely intangible. To the GoM, the Cat-DDO was attractive and helped elevate the profile of crisis preparedness and the previously marginalized National Disaster Management Center. The engagement with NDMC on the Cat-DDO, as well as the inclusion of health, created a favorable environment that supported the conversion of the center into an official authority, which had far-reaching benefits for preparedness in the Maldives. As such, the Cat-DDO can be used to strengthen the profile of crisis preparedness in places where it has not received much attention.

The institutional arrangement for implementing prior actions needs to be fully considered to maximize the success of DPFs and achieve attribution. A lesson learned from this operation should be to make sure selected indicators involve institutions that are aligned with the overall program implementation model. This DPF had limited influence over the achievement of the RIs associated with the expansion of the EWS and WSS networks. While their achievement would have contributed to the Objectives, they were not well linked to the DPF, and the operation had limited control over their achievement, as well as limited attribution.

13. Project Performance Assessment Report (PPAR) Recommended?

Yes

Please explain

As articulated by the program team, the Cat-DDO was vital in elevating disaster preparedness as a priority to the Ministry of Finance. Since the Cat-DDO itself is not part of the Results Framework, the impact of the instrument itself is not well-captured in the ICR or ICRR. A PPAR may be a better suited tool to capture the impacts of the Cat-DDO in strengthening preparedness and resilience.