



**Ministério das Finanças  
e do Fomento Empresarial**

Unidade de Acompanhamento  
do Setor Empresarial do Estado



# Manual of Procedures for the Implementation of Public-Private Partnerships in Cabo Verde

**Creating a country resilient to climate change!**



Ministério das Finanças  
e do Fomento Empresarial

Unidade de Acompanhamento  
do Setor Empresarial do Estado

# Manual of Procedures for the Implementation of **Public-Private** **Partnerships in Cabo Verde**

Approved by His Excellency Deputy Prime Minister,  
Minister of Finance and Business Development  
pursuant to Article 4, b), XVIII, of Decree-Law no.  
21/2024 of May 8th

July 2024



# TABLE OF CONTENTS

|  |           |
|--|-----------|
| <b>Abbreviations</b>   | <b>6</b>  |
| <b>Executive Summary</b>   | <b>8</b>  |
| <b>INTRODUCTION</b>  | <b>9</b>  |
| <b>1. LEGAL AND INSTITUTIONAL FRAMEWORK FOR PPPs</b>                             | <b>11</b> |
| 1.1 Legal Framework for PPPs   | 12        |
| 1.2 Institutional Framework for PPPs   | 12        |
| <b>2. INTEGRATING CLIMATE Resilience INTO CABO VERDE'S<br/>PPP PROJECT CYCLE</b> | <b>14</b> |
| <b>3. PPP PROJECT CYCLE STAGE 1: IDENTIFICATION</b>                              | <b>17</b> |
| 3.1 Phase 1: Preliminary Proposal  | 19        |
| <b>4. PPP PROJECT CYCLE STAGE 2: APPRAISAL</b>                                   | <b>25</b> |
| 4.1 Phase 2: Pre-Feasibility Study   | 27        |
| 4.2 Phase 3: Public Hearing  | 37        |
| 4.3 Phase 4: Feasibility Study   | 37        |
| <b>5. PPP PROJECT CYCLE STAGE 3: TENDER AND AWARD</b>                            | <b>51</b> |
| 5.1 Phase 5: Public Procurement Procedure  | 53        |
| <b>6. PPP PROJECT CYCLE STAGE 4: CONTRACT MANAGEMENT</b>                         | <b>69</b> |
| 6.1 Phase 6: Management, Monitoring, and Financing of the Contract               | 70        |



# ANNEXES

|  |           |
|--|-----------|
| <b>1. Glossary of Terms</b>  | <b>74</b> |
| <b>2. Climate Checklist for Risk Allocation Matrix - Design and Construction</b>   | <b>76</b> |
| <b>3. Climate Checklist for Risk Allocation Matrix - Operation and Maintenance</b> | <b>78</b> |
| <b>4. Climate Requirements in Operational Procedures</b>                           | <b>81</b> |
| <b>5. Climate-Informed Proposal Evaluation Criteria</b>                            | <b>83</b> |
| <b>6. Climate Change Risk and Resilience Resources</b>                             | <b>84</b> |

# TABLES

|   |           |
|---|-----------|
| <b>1. Preliminary Proposal Standard Application Form</b>              | <b>19</b> |
| <b>2. Pre-Feasibility Study PPP Assessment Checklist</b>              | <b>27</b> |
| <b>3. Hazards Assessment Checklist</b>                                | <b>30</b> |
| <b>4. ThinkHazard! Methodology</b>                                    | <b>31</b> |
| <b>5. Sensitivity Assessment Checklist</b>                            | <b>31</b> |
| <b>6. Capacity Assessment Checklist</b>                               | <b>32</b> |
| <b>7. Hazards Assessment Impact Checklist</b>                         | <b>32</b> |
| <b>8. Climate Risk Matrix Tool</b>                                    | <b>32</b> |
| <b>9. Guidance on Risk Rating and Next Steps</b>                      | <b>33</b> |
| <b>10. Pre-Feasibility Study Phase Review Checklist</b>               | <b>34</b> |
| <b>11. Phase 2 Pre-Feasibility Study Phase Comparative Assessment</b> | <b>35</b> |
| <b>12. Temperature Projections Checklist</b>                          | <b>41</b> |
| <b>13. Precipitation Projections Checklist</b>                        | <b>41</b> |
| <b>14. Assessment of External Risks Checklist</b>                     | <b>42</b> |



|  |           |
|--|-----------|
| <b>15. Incorporating Climate Outputs into the CBA Process Checklist</b>                      | <b>43</b> |
| <b>16. Guidance on the Use of Qualitative and Quantitative Assessment in VfM</b>             | <b>45</b> |
| <b>17. Affordability Considerations Checklist</b>  | <b>45</b> |
| <b>18. Safeguarding Commercial Feasibility and Bankability Checklist</b>                     | <b>46</b> |
| <b>19. Feasibility Study Phase Review Checklist</b>  | <b>47</b> |
| <b>20. Phase 4 Feasibility Study Phase Comparative Assessment</b>                            | <b>48</b> |
| <b>21. Climate-Informed Risk Allocation Matrix</b>   | <b>54</b> |
| <b>22. Insurance Coverage Checklist</b>  | <b>56</b> |
| <b>23. Payment Mechanism Checklist</b>   | <b>57</b> |
| <b>24. Incorporation of Relevant Climate Standards Checklist</b>                             | <b>58</b> |
| <b>25. Climate-Relevant KPIs Checklist</b>   | <b>58</b> |
| <b>26. Climate Considerations for Operational Procedures Checklist</b>                       | <b>59</b> |
| <b>27. Climate-Smart Criteria for the Tender Program/Tender of Specifications Checklist</b>  | <b>60</b> |
| <b>28. Climate-Smart Evaluation Criteria Checklist</b>                                       | <b>60</b> |
| <b>29. Climate Considerations for the PPP Contract Checklist</b>                             | <b>61</b> |
| <b>30. Tender Documentation Review Checklist</b>   | <b>62</b> |
| <b>31. Tender Documentation Comparative Assessment Prior to the Public Procurement Phase</b> | <b>63</b> |
| <b>32. PPP Contract Comparative Assessment Prior to Signing</b>                              | <b>65</b> |
| <b>33. Incorporating Climate Change into the Contract Management Plan</b>                    | <b>70</b> |
| <b>34. TCFD Thematic Areas</b>   | <b>71</b> |



# FIGURES

|   |    |
|---|----|
| 1. Cabo Verde's PPP Project Cycle as per PPP Decree-Law | 15 |
| 2. PPP Decision Framework Flowchart                     | 16 |
| 3. Identification Stage Flowchart                       | 18 |
| 4. Appraisal Stage Flowchart                            | 26 |
| 5. ThinkHazard! Example for Praia                       | 30 |
| 6. Tender and Award Stage Flowchart                     | 52 |
| 7. Contract Management Flowchart                        | 69 |

# ABBREVIATIONS

|              |  |
|--------------|--|
| <b>CBA</b>   | <b>Cost-Benefit Analysis</b>                                   |
| <b>CCA</b>   | <b>Climate Change Adaptation</b>                               |
| <b>CRA</b>   | <b>Carbon reduction assessment</b>                             |
| <b>CM</b>    | <b>Council of Ministers</b>                                    |
| <b>DRM</b>   | <b>Disaster Risk Management</b>                                |
| <b>ENRRD</b> | <b>2018-2030 National Strategy for Disaster Risk Reduction</b> |
| <b>eIRR</b>  | <b>Internal rate of return</b>                                 |
| <b>eNPV</b>  | <b>Expected net present value</b>                              |
| <b>GHG</b>   | <b>Greenhouse Gas</b>  |
| <b>GDP</b>   | <b>Gross Domestic Product</b>                                  |
| <b>GWP</b>   | <b>Global Warming Potential</b>                                |
| <b>IMF</b>   | <b>International Monetary Fund</b>                             |
| <b>IPCC</b>  | <b>Intergovernmental Panel on Climate Change</b>               |
| <b>KPI</b>   | <b>Key Performance Indicators</b>                              |
| <b>LCA</b>   | <b>Lifecycle Assessment</b>                                    |
| <b>MAA</b>   | <b>Ministry of Environment and Agriculture</b>                 |



|                |  |
|----------------|--|
| <b>MDB</b>     | <b>Multilateral Development Bank</b>                       |
| <b>MF</b>      | <b>Ministry of Finance</b>                                 |
| <b>NAP</b>     | <b>National Adaptation Plan</b>                            |
| <b>NDC</b>     | <b>Nationally Determined Contributions</b>                 |
| <b>O&amp;M</b> | <b>Operations and Maintenance</b>                          |
| <b>PPP</b>     | <b>Public-Private Partnership</b>                          |
| <b>RFP</b>     | <b>Tender Specifications</b>                               |
| <b>RFQ</b>     | <b>Tender Program</b>                                      |
| <b>SDG</b>     | <b>Sustainable Development Goals</b>                       |
| <b>SIDS</b>    | <b>Small Island Development States</b>                     |
| <b>SM</b>      | <b>Sector Ministry</b>                                     |
| <b>TCFD</b>    | <b>Task Force on Climate-related Financial Disclosures</b> |
| <b>VfM</b>     | <b>Value for Money</b>                                     |
| <b>WBG</b>     | <b>World Bank Group</b>                                    |

# EXECUTIVE SUMMARY

A public-private partnership (PPP) is a legal, long-term contractual relationship between a public entity and a private partner, for the provision and/or development of a public asset or service, in which the private party assumes significant risk and management responsibility throughout the life of the contract, and remuneration to the private party is linked to performance and/or the demand or use of the asset or service. It may include the design, financing, construction, operation, and/or maintenance of a public asset or service.

On 13 November 2015, the Government of Cabo Verde approved Decree-Law No. 63/2015 (the “PPP Decree-Law”) to define the country’s PPP framework. Subsequently, Cabo Verde’s Strategic Plan for Sustainable Development 2017-2021 and Ambition 2030 further affirm the government’s commitment to leveraging the private sector to support infrastructure investment and achieve sustainable development.

**Recognizing that the country is significantly threatened by climate change, Cabo Verde has also taken steps in the development of a comprehensive climate change policy framework. In line with Cabo Verde’s climate change goals outlined in key policy documents including 2021 Nationally Determined Contribution (NDC) and the National Adaptation Plan (NAP) for 2022-2030, the Government of Cabo Verde is now prioritizing reforms and investments, including through PPP projects, that are “climate resilient”.**

Consequently, in May 2024 the PPP Decree-Law was amended to require an assessment of climate risks and impacts throughout the PPP project cycle. Further amendments to the PPP Decree-Law were also made to support its effective implementation. These included strengthening the applicability and enforceability of the PPP regime vis-à-vis other sectorial concessions’ legal regimes; clarifying the roles of responsibilities of the key actors, and simplifying and tightening some processes during the identification and appraisal stages.

To further support the implementation of the PPP Decree-Law and strengthen awareness and knowledge of the PPP decision-making process, the Government of Cabo Verde has adopted

this Manual of Procedures (the “PPP Manual”) as required under Article 4 of the PPP Decree-Law. The objective of the PPP Manual is to support the implementation of an effective PPP program that can attract private sector investment and participation in the provision of public infrastructure services, while contributing to the Government of Cabo Verde’s national development priorities, including climate change objectives.

The PPP Manual lays out the legal and institutional framework for PPPs in Cabo Verde, defined by the PPP Decree-Law, and provides more guidance regarding the roles and responsibilities of key actors, including the Council of Ministers (CM), the Ministry of Finance (MF) and its Entity Responsible for Entity Responsible for PPP<sup>1</sup>, Ministry of Environment and Agriculture (MAA), contracting authorities, and technical and monitoring committees established for each PPP project. It also provides detailed guidance on the phases of the PPP project cycle to standardize the PPP development process and help PPP decision-makers and contracting authorities prepare and implement PPPs.

To reflect the PPP Decree-Law’s amendments and contribute to the Government of Cabo Verde’s climate change objectives, this PPP Manual also supports the incorporation of climate change considerations into the PPP project cycle through the provision of climate change-specific guidance material and standard checklists. Considering the climate vulnerabilities of the country and its current implementation capacity, the Manual focuses on climate adaptation, specifically examining how climate change and natural disasters affect PPP projects. As the country’s capabilities in addressing climate change progress, the Manual will be enhanced to incorporate tools for assessing the impact of PPP projects on climate change mitigation efforts. This enhancement will enable the development of both climate resilient but also low-carbon infrastructure.

Through its adoption, this PPP Manual will provide stability and standardization of PPP processes and signal the government’s commitment to the implementation of a credible and effective PPP program. All PPPs are to be developed and implemented according to the PPP project cycle laid out in the PPP Decree-Law and this PPP Manual, and must also align with applicable laws in Cabo Verde, including the Budgetary Framework Law and the Public Procurement Code.

The PPP Manual should be considered as a “living” document that is updated as new information, improvements, and capacities are available.

1. According to the new organic structure of the MF (2016), the PPP and Privatization Unit (JPPPP) and the State Subsidiaries Service were merged into the Unit for State Business Sector Monitoring (UAASE). However, for the purposes of this PPP Manual, and in accordance with the new PPP Decree-Law, the figure generically called the Entity Responsible for PPPs has been stipulated.



# INTRODUCTION

On 13 November 2015, the Government of Cabo Verde approved the Public-Private Partnership (PPP) Decree-Law No. 63/2015 of November 13th (the “PPP Decree-Law”) to define the country’s PPP legal and institutional framework and establish a process for the identification, preparation, and implementation of PPP projects.<sup>2</sup>

Under the PPP Decree-Law, the PPP Unit<sup>3</sup> has the function of coordinating the PPP program, including systematizing good practices on the use of PPPs, and producing guidance material that provides further detail on the PPP project cycle, including a Manual of Procedures (the “PPP Manual”). The PPP Manual is intended to strengthen awareness and knowledge of the PPP project development and implementation processes and institutional responsibilities, and support Government of Cabo Verde officials in the identification, preparation, and implementation of PPPs. It provides guidance and further detail on the government’s decision-making process throughout the PPP project cycle, in alignment with the PPP Decree-Law. Through its adoption, this PPP Manual will provide stability and standardization of PPP processes and signal the government’s commitment to the implementation of a credible and effective PPP program.

Cabo Verde is an archipelago of ten small and dispersed volcanic islands with no permanent water courses, only two islands with underwater reserves, no natural forests, limited mineral resources, and only 12 percent of arable land. It is significantly

threatened by climate change and is expected to experience more heatwaves and more irregular rainfall in future years. This brings increased risks of flooding, droughts and rising sea levels. These intensified climate hazards create socio-economic vulnerabilities in Cabo Verde, since infrastructure, population, and tourism activities are concentrated in coastal areas where climate change risks and impacts are highest. Consequently, the potential costs to the country’s economy, physical assets, and population are significant. According to the 2021 National Adaptation Plan (NAP), 315 natural disasters were recorded in 2018, compared to 350 disasters between 2008 and 2017. This increase is indicative of the impacts of climate change, and these natural disasters are estimated to have cost one percent of GDP per year.<sup>4</sup>

In May 2024, amendments were made to the PPP Decree-Law to incorporate requirements for assessing climate risk and ensuring climate resilience across all stages of the PPP project cycle. This PPP Manual is designed to facilitate the integration of climate change considerations at every phase of the PPP project cycle, with a specific focus on climate resilience, aligning with the approved amendments to the PPP Decree-Law in 2024.

Cabo Verde’s PPP framework is designed to ensure that the country’s PPP contracts adhere to the following basic principles:

- **Climate Resilient Infrastructure:** PPPs should contribute towards achieving Cabo Verde’s climate goals and commitments, such as those included in the NAP and Nationally Determined Contributions (NDC). PPP projects will be prepared and implemented in a way that supports environmental sustainability and ensures they are resilient to the impacts of climate change to the extent possible. Prioritized PPP projects will build resilience to the impact of climate change and generate co-benefits such as enhanced economic diversification, energy security, and improved public health.
- **Improved risk allocation:** the identified risks of each project, including identified climate change-related risks, should be assigned to the entity with the greatest capacity to manage, control, and deal with their impacts.
- **Budgetary responsibility:** PPPs should follow fiscal affordability and long-term fiscal sustainability which can be impacted by, among others, committing to government payments, provision of public support and exposure to risks.
- **Transparency:** ensure that civil society is informed and consulted about projects within the PPP program, and that no person is unduly favored or disadvantaged within the process. This includes reporting and disclosure requirements related to project documentation at various stages of the PPP project cycle.

<sup>2</sup> The passing of the PPP Decree-Law resulted in the repealing of Decree-Law No. 46/2005 of July 4th. This prior Decree Law had defined the “general rules applicable to the State’s performance in the prioritization, design, preparation, public hearing and consultation, tender, award, amendment, inspection, global monitoring and termination of PPPs.”

<sup>3</sup> According to the new organic structure of the MF (2016), the PPP and Privatization Unit (UPPPP) and the State

Subsidiaries Service were merged into the Unit for State Business Sector Monitoring (UAASE). However, for the purposes of this PPP Manual, and in accordance with the new PPP Decree-Law, the figure generically called the Entity Responsible for PPPs has been stipulated.

<sup>4</sup> IMF, Cabo Verde Climate Public Investment Management Assessment (C-PIMA), 2023.

The remainder of this PPP Manual is organized as follows:

**Chapter  
1**

**Legal and Institutional Framework for PPPs**

– Describes the legal and institutional framework for PPPs in Cabo Verde.

**Chapter  
2**

**Integrating Climate Change Resilience into the PPP Project Cycle**

– Provides an overview of the PPP project cycle. Detailed guidance, checklists, and templates to support projects through each phase of the PPP project cycle, including integration of climate change adaptation considerations;

**Chapter  
3**

**Stage 1. Identification**

– Describes Phase 1 Preliminary Proposal;

**Chapter  
4**

**Stage 2. Appraisal**

– Phase 2 Pre-Feasibility Study;  
– Phase 3 Public Hearing;  
– Phase 4 Feasibility Study;

**Chapter  
5**

**Stage 3. Tender and Award**

– Includes Phase 5 Public Procurement Procedure;

**Chapter  
6**

**Stage 4. Contract Management**

– Includes Phase 6 Management, Monitoring, and Financing;



Key terms used throughout the PPP Manual are defined in Annex 1 Glossary of Terms.

# 01

## LEGAL AND INSTITUTIONAL FRAMEWORK FOR PPPs

- 1.1 Legal Framework for PPPs
- 1.2 Institutional Framework for PPPs



# 1 LEGAL AND INSTITUTIONAL FRAMEWORK FOR PPPS

## 1.1 LEGAL FRAMEWORK FOR PPPS

For the purposes of the PPP Decree-Law and this PPP Manual which entered into force on May 3, 2024, PPPs are long-term contractual arrangements between a private party and a government entity, for providing or developing a public service and asset, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance. PPPs may include the design, financing, construction, operation, and/or maintenance of a public asset or service.

Since the PPP Decree-Law from 2015 enactment, it has faced implementation challenges due to the co-existence of sectorial long-term concession and sub-concession contracts provided for in existing Legislative Decrees and Decree-Laws. However, one of the fundamental elements of the recent 2024 amendments of PPP Decree-Law is to establish its prevalence over other regimes when criteria for a PPP project is met. This is an attempt to establish clear rules so that the various contract types can co-exist with each other, without generating overlaps or conflicts.

## 1.2 INSTITUTIONAL FRAMEWORK FOR PPPS

An effective institutional framework for the implementation of PPPs is critical to the effectiveness of the PPP program in Cabo Verde. Centralized planning to guide public entities and private partners throughout the PPP project cycle helps to enable high-quality PPP projects, increases knowledge transfer and capacity based on practical experience, and ensures efficient and consistent processes. Establishing and operationalizing an institutional framework within a clear governance structure is therefore a priority for the Government of Cabo Verde, as stated in the PPP Decree-Law.

The PPP Decree-Law, as amended in May 2024, clearly defines the roles of the key institutions within the PPP program and emphasizes the need for effective coordination given the plurality of institutions involved. Setting strategic priorities and guidelines for the Annual PPP Plan is the responsibility of the Council of Ministers (CM). The Ministry of Finance (MF) is responsible for the strategic priorities and guidelines for the PPP program, fiscal oversight and approves the list of PPP projects included within the Annual PPP Plan and the procurement processes. The day-to-day oversight and coordination of the PPP program is the responsibility of the Entity Responsible for PPP which also provides support to projects at each stage of the PPP project cycle. The Entity Responsible for PPP assists the identification, appraisal, tender and award of PPP projects alongside a Technical Committee

established for each project. In addition to the Technical Committees set up to carry out the preparatory phases of PPP projects, Monitoring Committees are created for each project to assist both the contracting authority and the Entity Responsible for PPP with contract management. The Ministry of Environment and Agriculture (MAA) provides oversight of climate change issues throughout the PPP project cycle through participation on each Technical and Monitoring Committee.

The institutional architecture for PPPs, as described in the PPP Decree Law and in this Manual, is intended to capture the political and technical dimensions of PPPs, from higher-level decision-making under the CM to project preparation under each Technical Committee. Descriptions of each institution are provided in the following sections.

### 1.2.1 COUNCIL OF MINISTERS

The CM defines strategic priorities and provides guidelines for Annual PPP Planning in alignment with Cabo Verde's climate commitments and objectives. These guidelines are aimed to ensure that the PPP program is aligned with national development priorities and the public interest. The CM also approves or rejects the feasibility studies of PPP projects that have been incorporated into the Annual PPP Plan. As a result of the feasibility study approval, the CM also authorizes the launch of each public procurement procedure. The CM may intervene in additional steps for contract approval in line with the prescriptions of the Procurement Code.

### 1.2.2 MINISTRY OF FINANCE

The MF is responsible for overall coordination of the PPP program, implementing the strategic vision of the CM, and ensuring the fiscal sustainability of the PPP program. During the PPP project cycle, the MF is responsible for approving projects to be included in the Annual PPP Plan and provides technical oversight of each project, with a particular focus on fiscal risks. It is important to note that PPP contracts are long-term in nature and create fiscal commitments between the government and the private partner. Therefore, ensuring the fiscal sustainability of the PPPs, through accurate assessment and management of fiscal commitments is critical. To support this objective the PPP Decree-Law ensures that fiscal control of all PPPs is centralized in the MF. The MF also works with the MAA and Sectorial Ministry (SM) to jointly establish each project's Technical Committee and Monitoring Committee.

It has oversight and approval authority over the following steps within the PPP project cycle:

- I. Approve or reject preliminary project proposals;
- II. Approve or reject pre-feasibility studies of projects. This authorizes, as a result of the approval, the project to be incorporated into the Annual PPP Plan and the project to proceed to feasibility study;
- III. Review the fiscal sustainability of each PPP project prior to the public procurement procedure, including approval of any guarantees or other fiscal support;
- IV. Establish on an annual basis, in accordance with the Budgetary Framework Law, a threshold for public contributions to PPP projects;
- V. Establish on an annual basis, in accordance with the Budgetary Framework Law, the minimum threshold for investment costs for a project to be compatible with the PPP program;
- VI. Project and update estimated fiscal commitments under the PPP program for the next five (5) years, including contingent liabilities arising from risks allocated to the public entity;
- VII. Publish information related to all new projects approved by the CM and ongoing PPP projects and include this information in the Annual Budget Law;
- VIII. Approve or reject, by Joint Order with the SM, the tender program and tender specifications for each PPP project to proceed to the public procurement procedure;
- IX. Approve or reject, by Joint Order with the SM, the award of each PPP contract following the public procurement procedure;
- X. Approve or reject PPP contracts as provided by the Public Procurement Code;
- XI. Once a PPP contract is effective, approve or reject any requests for contract modifications.

### 1.2.3 PPP UNIT

The Entity Responsible for PPP is the technical arm of the MF with regards to PPPs, and it is responsible for creating an environment conducive to the promotion of PPPs. This requires day-to-day coordination with key institutions within the PPP program, technical oversight of the PPP project cycle, management of the PPP gateway process, and awareness building and other capacity building initiatives to systematize good practices on the use of PPPs.

During the PPP project cycle, the Entity Responsible for PPP plays a key technical role in supporting project preparation and participates in each project's Technical Committee. Once projects

are under implementation, the Entity Responsible for PPP is responsible for recording and reporting fiscal commitments associated with each project to the MF. It submits an annual report on the PPP program's estimated fiscal commitments to the Minister of Finance. The Entity Responsible for PPP must also ensure that the Directorates-General for Treasury and Finance and the Budget have access to data on the estimated fiscal commitments of each PPP.

### 1.2.4 CONTRACTING AUTHORITIES

Public entities are the contracting authorities for the preparation and procurement of PPP projects. They are also responsible for the management of PPP contracts. During the PPP project cycle, the MF establishes a Technical Committee which comprises representatives of: i) the MF (one must be staff from the Entity Responsible for PPP); ii) SM or contracting authorities; and iii) the MAA. The SM, by Joint Order with the MF, approves the tender program and tender specifications for each PPP project to proceed to the public procurement procedure and the award of each PPP contract following the public procurement procedure.

### 1.2.5 MINISTRY OF AGRICULTURE AND THE ENVIRONMENT

The MAA is responsible for providing oversight of climate change considerations for each PPP project. The MAA appoints a member for the Technical and Monitoring Committees to support the technical work required for integrating climate resilience considerations over the course of the project during different phases, including conducting climate risk screening and climate risk assessments during the appraisal stage, in addition to appointing a member of the jury to assist in the assessment of the climate requirements of applications and proposals.

### 1.2.6 TECHNICAL AND MONITORING COMMITTEES

Once the MF has approved a project's preliminary proposal, a Technical Committee is established by the MF with the purpose of preparing each project. The Technical Committee will typically have 3 to 5 members and must be multidisciplinary in composition to be able to provide sufficient technical support to ensure high-quality PPP projects. It must include representatives from the respective sectorial supervisor of the contracting authority and or SM, MF (represented by the Entity Responsible for PPP), and MAA.

Similarly, once a PPP contract is awarded, a Monitoring Committee is established by the MF. The Monitoring Committee is responsible for supporting the contracting authority and the MF with the management of the PPP contract during implementation and operation. Similar to the Technical Committee, it comprises a multidisciplinary set of members from the contracting authority and or SM, Entity Responsible for PPP, the MAA, as well as an independent external expert, as a way to reduce potential conflict of interest.

# 02

## INTEGRATING CLIMATE RESILIENCE INTO CABO VERDE'S PPP PROJECT CYCLE

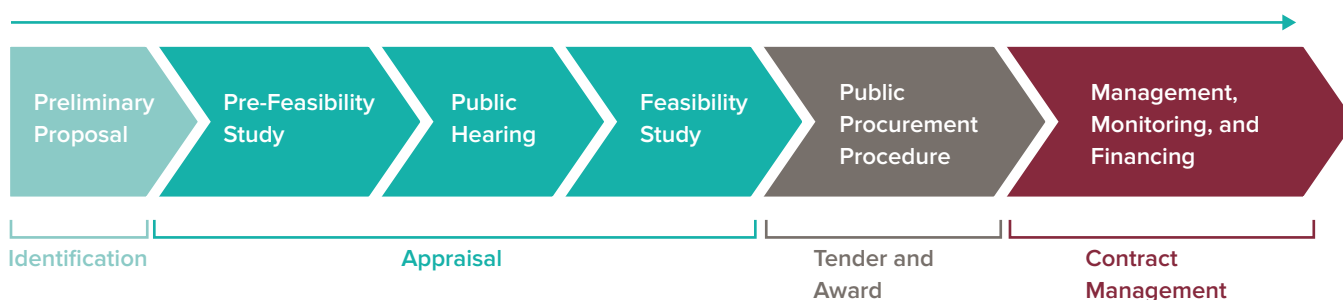


## 2 INTEGRATING CLIMATE RESILIENCE INTO CABO VERDE'S PPP PROJECT CYCLE

The PPP project cycle defines the phases of a PPP project's development. Under the PPP Decree-Law, all PPPs in Cabo Verde must follow the PPP project cycle laid out in the PPP Decree-Law. As illustrated in the figure 1 below, Cabo Verde's PPP project cycle consists of six phases. For the purposes of this PPP Manual, these six phases have been split across four stages: identification, appraisal, tender and award, and contract management, as shown in the figure below.

Figure 1: Cabo Verde's PPP Project Cycle as per PPP Decree-Law

### Cape Verde's PPP Project Cycle as per PPP Decree-Law

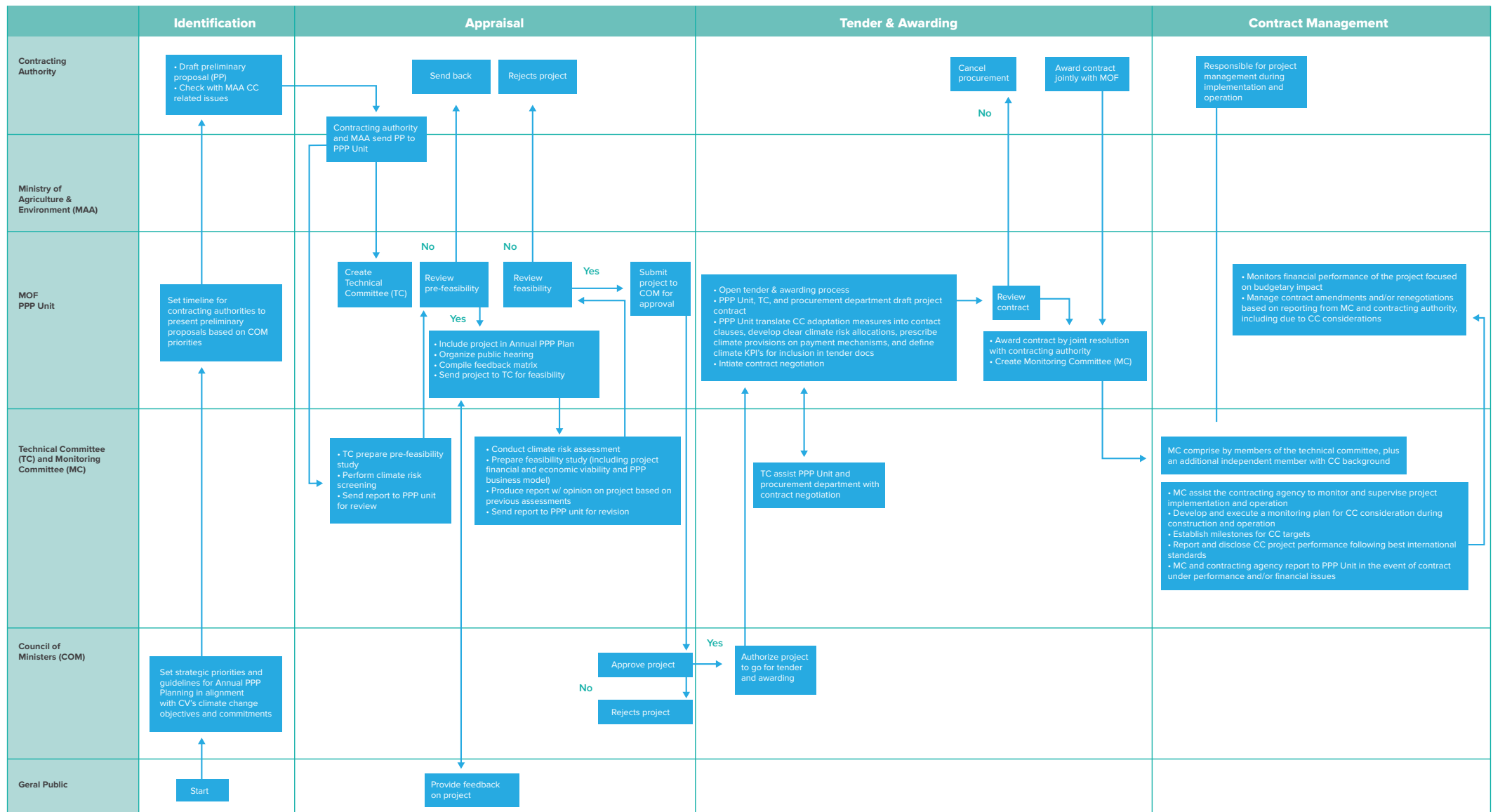


Each stage within the PPP project cycle is made up of a series of defined tasks with various approval steps based on the institutional framework laid out in Chapter 1. **The figure below (Figure 2) captures the appraisal and approval steps within each stage.**

Cabo Verde's climate mitigation and adaptation targets, as outlined in the NDC and NAP, are guiding principles for the PPP program. Each potential PPP project must therefore be analyzed and its potential to help achieve Cabo Verde's economic and social development goals should be measured, while considering its climate objectives. To ensure adequate integration of climate considerations into Cabo Verde's PPP program, this PPP Manual applies climate considerations to each phase of Cabo Verde's project cycle, with a with a specific focus on climate resilience.

The following chapters provide detailed guidance of each phase within the PPP project cycle, including practical templates and check lists that the Entity Responsible for PPP, Technical Committees, and other stakeholders in Cabo Verde can use to systematically incorporate climate resilience considerations into the design of PPP projects.

Figure 2: PPP Decision Framework Flowchart



Note: When a project is rejected, contracting authorities might review it and propose it again for evaluation.



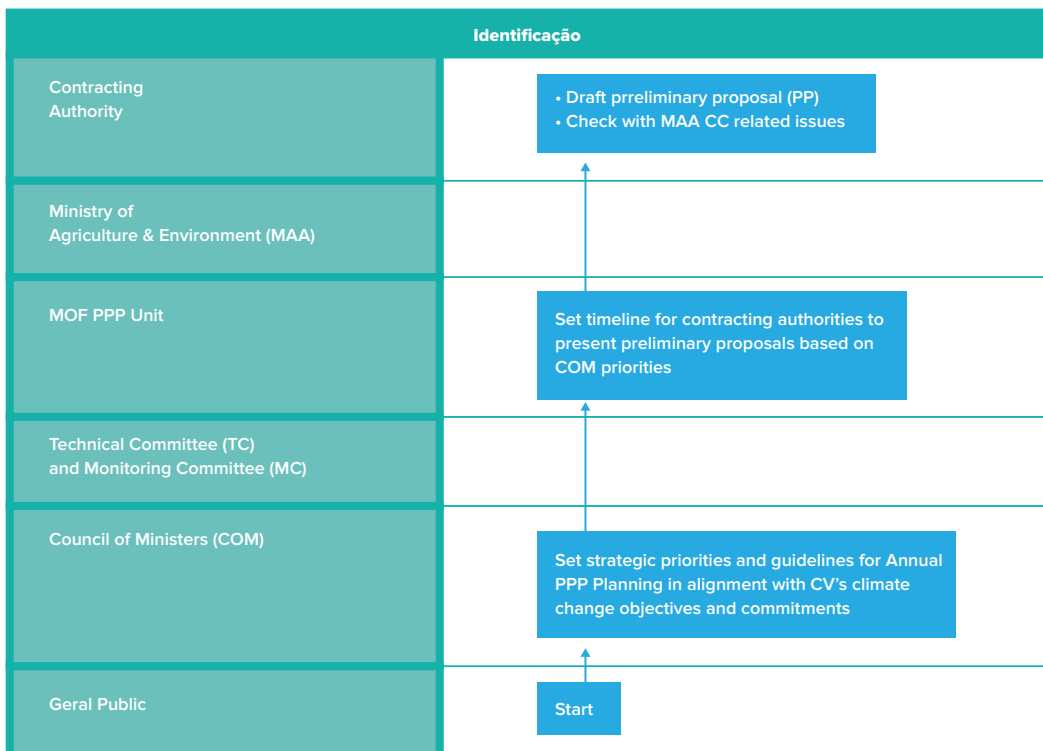
# 03

PPP PROJECT CYCLE  
STAGE 1:  
**IDENTIFICATION**



# 3 PPP PROJECT CYCLE STAGE 1: IDENTIFICATION

Figure 3: Identification Stage Flowchart



## 3.1 PHASE 1: PRELIMINARY PROPOSAL

In the first phase of the PPP project cycle, the CM is responsible for providing the PPP program with strategic oversight, including the setting of priorities and guidelines for the Annual PPP Plan. This should include the alignment with Cabo Verde's national and sector development plans, its commitment to the Paris Agreement and national climate change policy framework, including NDC and NAP. Based on this direction, the MF requests the submission of preliminary proposals from contracting authorities for projects that meet the priorities and guidelines outlined by the CM, setting a deadline for such submission.

### 3.1.1 PREPARATION OF A PRELIMINARY PROPOSAL

The preliminary proposals to be submitted by contracting authorities to the MF require the completion of a standard application form. The form, included in the table below, will outline the following: project details, project suitability, project structure, needs and benefits, viability, climate resilience consideration and risks, next steps, and declaration.

Table 1: Preliminary Proposal Standard Application Form

### Project Details

|   |
|---|
| 1.1. Project name (full title)  |
|   |
| 1.2. Project sector   |
|   |
| 1.3. Project type (e.g. road, hospital, port etc.)  |
|   |
| 1.4. Project location   |
|   |
| 1.5. Sponsoring public entity   |
|   |
| 1.6. List any other government entities with an important role in the project (and describe their role)             |
|   |
| 1.7. List any other key stakeholders of the project, other than the public entity and the private party             |
|   |
| 1.8. Provide a description of the project (summarizing other relevant information, in a few paragraphs at the most) |
|   |

<sup>5</sup> The Annual PPP Plan aims to ensure that the coherence of the PPP program and enables scarce public resources, both funding and human capital, to be concentrated on the delivery of a pipeline of prioritized PPP projects. The Annual PPP Plan is managed by the MF.

## PPP Suitability

|  |   |   |
|--|---|---|
| 2.1. Describe the services/outputs that the private party will deliver   |   |   |
|  |   |   |
| 2.2. Will any legislation/regulation need to be enacted to allow the private sector to deliver and charge for the services?  |   |   |
|  |   |   |
| 2.3. Have the project services been delivered previously by the private sector in Cabo Verde? (If yes, provide an example)   |   |   |
|  |   |   |
| 2.4. Has the public entity previously delivered the envisaged project services?  |   |   |
|  |   |   |
| 2.5. Estimated capital costs incurred by private party   | 2.6. Estimated value of public assets transferred to/ leased/managed by private party, expressed as a present value   | 2.7. Estimated total subsidy / equity to be contributed by entities |
|  |   |   |
| 2.8. Total investment value, calculated as the sum of items 2.5, 2.6, and 2.7 (all amounts should ideally be expressed as present values)  | 2.9. Estimated yearly operational costs   |   |
|  |   |   |
| 2.10. Estimated period of contract   | 2.11. Estimated economic life of project  |   |
|  |   |   |
| 2.12. Describe any linked projects or components that need to be implemented prior to this project (such as water, gas, power, access road, transport link etc.)   |   |   |
|  |   |   |
| 2.13. Project rationale (tick the options that apply)  |   |   |
| <input type="checkbox"/>   | <i>Project is difficult to implement with financial resources of Government alone</i>   |   |
| <input type="checkbox"/>   | <i>Private investment would increase the quality / level of service</i>   |   |
| <input type="checkbox"/>   | <i>Private investment would reduce the time to implement compared to what Government could accomplish on its own</i>  |   |
| <input type="checkbox"/>   | <i>There is opportunity for competition among private investors which may reduce the cost of providing the service (relative to what conventional Government procurement could achieve)</i> |   |
| <input type="checkbox"/>   | <i>Private investment will provide an opportunity for innovation</i>  |   |
| <input type="checkbox"/>   | <i>Others (describe below)</i>  |   |
|  |   |   |
| 2.14. Are you aware of a similar project being delivered through a PPP model elsewhere? If so, in which countries? (Attach any reference material i.e. project reports, website link etc.)   |   |   |
|  |   |   |
| 2.15. List the names of local or foreign private companies that are likely to be interested in this project and have experience implementing similar projects (also list the project names). (Attach any reference material i.e. project reports, website link etc.) |   |   |
|  |   |   |

## PPP Structure

3.1. Which project components will be provided by the private sector? (Describe each component and tick the option that applies)

| Component            | Description | Public sector | Private sector | Not applicable |
|----------------------|-------------|---------------|----------------|----------------|
| Detailed design      |             |               |                |                |
| Build (construction) |             |               |                |                |
| Operate              |             |               |                |                |
| Finance              |             |               |                |                |
| Maintain             |             |               |                |                |
| Equipment            |             |               |                |                |

3.2. Indicate the expected risk allocation between the private and public sector. (Tick the option that applies and provide comments)

| Risk Category                     | Public sector | Shared | Private sector | Not applicable | Comments |
|-----------------------------------|---------------|--------|----------------|----------------|----------|
| Output specification              |               |        |                |                |          |
| Design risk                       |               |        |                |                |          |
| Design & technology obsolescence  |               |        |                |                |          |
| Latent defect risk                |               |        |                |                |          |
| Land acquisition and resettlement |               |        |                |                |          |
| Financing risk                    |               |        |                |                |          |
| Construction risk (unknown)       |               |        |                |                |          |
| Construction risk (known)         |               |        |                |                |          |
| Commissioning risk                |               |        |                |                |          |
| Operating risk                    |               |        |                |                |          |
| Price fluctuation risk            |               |        |                |                |          |
| Operational performance risk      |               |        |                |                |          |
| Demand risk                       |               |        |                |                |          |
| Others (list)                     |               |        |                |                |          |

## Needs and Benefits

|  |
|--|
| 4.1. Describe the project's objectives and benefits to the public  |
|  |
| 4.2. Briefly describe other options that have been considered for delivering the service (e.g. conventional public procurement, use of existing assets, non-asset solutions) |
|  |
| 4.3. List any sector policy or plans that include the project  |
|  |

## Viability

|   |                     |                               |                               |  |  |  |  |  |
|---|---------------------|-------------------------------|-------------------------------|--|--|--|--|--|
| 5.1. Based on a preliminary assessment, is the project technically and operationally feasible?  |                     |                               |                               |  |  |  |  |  |
|   |                     |                               |                               |  |  |  |  |  |
| 5.2. Based on a preliminary assessment, is the project financially feasible?  |                     |                               |                               |  |  |  |  |  |
|   |                     |                               |                               |  |  |  |  |  |
| 5.3. Is the financial feasibility of the project dependent on receiving any financial assistance (including the amount) that the project is likely to receive from the government budget or from development partners |                     |                               |                               |  |  |  |  |  |
|   |                     |                               |                               |  |  |  |  |  |
| 5.4. Is the project likely to provide better value for money as a PPP than conventional public sector procurement?  |                     |                               |                               |  |  |  |  |  |
|   |                     |                               |                               |  |  |  |  |  |
| 5.5. What is the main source of project revenue? (Tick the option that applies briefly describe the proposed revenue model)   |                     |                               |                               |  |  |  |  |  |
| <table border="1"> <tr> <td><i>User charges</i></td> <td></td> <td><i>Public entity payments</i></td> <td></td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>                                 | <i>User charges</i> |                               | <i>Public entity payments</i> |  |  |  |  |  |
| <i>User charges</i>   |                     | <i>Public entity payments</i> |                               |  |  |  |  |  |
|   |                     |                               |                               |  |  |  |  |  |

## Environment and Social Risk

|  |
|--|
| 6.1. List any climate change related risks and impacts   |
|  |
| 6.2. Confirm alignment with NDC and NAP  |
|  |
| 6.3. Confirm environmental impacts of the project are in compliance with environmental laws and regulations              |
|  |
| 6.4. List any significant environmental impacts of the project   |
|  |
| 6.5. List any significant negative social impacts of the project (e.g. resettlements, job losses)                        |
|  |
| 6.6. Will the project require land acquisition and if so, will the private party request the entity to acquire any land? |
|  |

## Climate Resilience Considerations

| Confirm alignment with NDC and NAP                |   |               |
|---|---|---------------|
| List any climate change related risks and impacts |   |               |
| Climate-related Hazards                           |   |               |
| Type of Hazard                                    | Question  | Select Yes/No |
| Coastal flood (by hurricane)                      | Is your project situated in a coastal area and susceptible to the impacts of coastal erosion or waves caused by hurricanes?   |               |
| Coastal flood (by storm surges or tsunamis)       | Is your project located in a low-lying coastal area that is exposed to the risk of coastal flooding from increased water levels caused by storm surges or tsunamis? |               |
| Fluvial flood                                     | Is your project situated near a river or a stream that is prone to river flooding?  |               |
| Pluvial flood                                     | Is your project situated in urban area and susceptible to the impacts of pluvial flooding?  |               |
| Drought   | Is your project dependent on water resources that are affected by droughts which can adversely impact water availability and quality?                               |               |
| Landslides  | Is your project located on or near a slope that is susceptible to landslides, which are mass movements of soil, rock, or debris?                                    |               |

## Next Steps

| 8.1. Provide an indicative timeline for the project   |      |
|---|------|
| Step  | Date |
| <i>Preliminary Proposal</i>   |      |
| <i>Approval of Pre-Feasibility Study</i>  |      |
| <i>Approval of Feasibility Study</i>  |      |
| <i>Commencement of Public Procurement Procedure</i>   |      |
| <i>Tender Award</i>   |      |
| <i>Contract Signature</i>   |      |
| 8.2. Describe any constraints on the timing of the project  |      |
| 8.3. Provide the key contact names (and their contact details) for the project  |      |
| 8.4. Describe any financial resources that have already been made available for pre-feasibility study                                     |      |
| 8.5. Does the public entity require support for preparation of the pre-feasibility study? And what is the estimated cost of that support? |      |



## Attachments

9.1. Attach any working documents that were used to complete this form. List them below.

|  |
|--|
|  |
|--|

## Declaration

10.1. I hereby declare that (a) the information provided in this application and supporting documents submitted with it are true and correct, and (b) the project has been duly approved by the authorized signatory in the respective entity. (Sign below)

| <i>Initiating/responsible officer</i> |  | <i>Head of Public Entity</i> |  |
|---------------------------------------|--|------------------------------|--|
| <i>Name</i>                           |  | <i>Name</i>                  |  |
| <i>Signature</i>                      |  | <i>Signature</i>             |  |





# 04

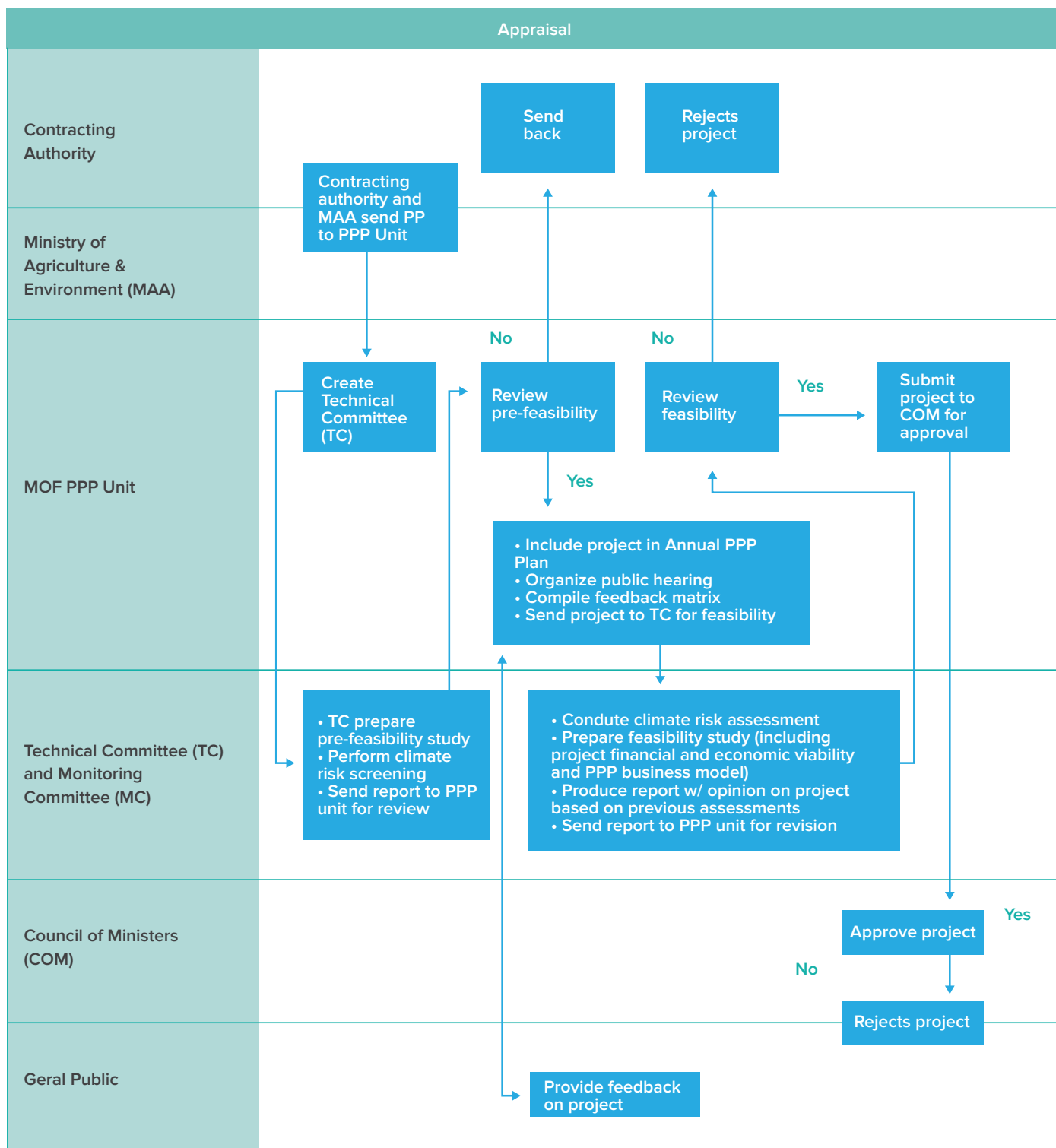
## PPP PROJECT CYCLE STAGE 2: **APPRAISAL**

- 4.1 Phase 2: Pre-feasibility study
- 4.2 Phase 3: Public hearing
- 4.3 Phase 4: Feasibility study



# 4 PPP PROJECT CYCLE STAGE 2: APPRAISAL

Figure 4: Appraisal Stage Flowchart



The project appraisal stage is broken down into the following three phases:

I Phase 2:  
pre-feasibility study

II Phase 3:  
public hearing

III Phase 4:  
feasibility study.

## 4.1 PHASE 2: PRE-FEASIBILITY STUDY

The second phase in the PPP project cycle is the pre-feasibility study. A pre-feasibility study is a multidisciplinary study that aims to provide sufficient project information to enable the MF to determine whether the project should be included in the Annual PPP Plan.

Prior to the preparation of a pre-feasibility study, a Technical Committee is established by a Joint Ordinance of the MF, the contracting authority and or SM, and the MAA. The Technical Committee's main responsibilities are the preparation of a pre-feasibility, feasibility studies and the preparation of tender program and tender specifications.

The pre-feasibility study is a desk review in which Technical Committee uses existing or available data and information from their departments to analyze and verify that there are no initial obstacles to proceeding with the project. A pre-feasibility study is less much detailed than a full feasibility study, but it evaluates project characteristics that relate to the economic, financial, legal, social, and environmental viability of the project. Using the pre-feasibility study, the MF will decide whether the project contains enough potential to proceed to the next stage (a more detailed full feasibility study), which is costly and takes longer.

To ensure high quality and effective project appraisal, a consultancy firm can be hired for the preparation of pre-feasibility and feasibility studies. The Technical Committee is responsible for defining the terms of reference in case is hired.

### 4.1.1 PRELIMINARY PPP ASSESSMENT

The Technical Committee is required to prepare the pre-feasibility study to assess a project's PPP suitability and viability. This is imperative to identify feasibility challenges early on, assess PPP suitability, optimize resource allocation, enhance stakeholder confidence, and facilitate informed decision-making. By conducting this preliminary assessment, stakeholders can proactively address potential risks, align project objectives with partnership strengths, prioritize resource allocation effectively, foster stakeholder trust, and understand the overall feasibility and impact of the project, ultimately increasing the likelihood of successful PPP implementation.

For each project, the prefeasibility study will provide responses and assessments for the PPP Pre-Feasibility Study PPP Assessment Checklist provided in Table 2 below based upon the information that is available.

Table 2: Pre-Feasibility Study PPP Assessment Checklist

| Item  | Comments |
|---|----------|
| <b>Needs and options analysis</b>   |          |
| Does the proposed project meet the present or future needs of the public? Have the likely benefits to users been identified?  |          |
| Does it meet the objectives of the sponsoring public entity and wider policy goals? Does the project fit within strategic plans?  |          |
| Have a number of different options been identified to deliver the service/facility/product?   |          |
| Have those options been compared from technical, land & resettlement, environmental & social, and private sector interest perspectives? Has a preferred option been identified? |          |
| Have alternatives to new asset development been considered (i.e. use of existing assets and non-asset solutions)?   |          |
| <b>Location</b>   |          |
| Has the project site or options for the site options been identified?   |          |

|  |  |
|--|--|
| Is the project site or at least one of the project site options suitable from a technical and operational perspective and under master plans?                                      |  |
| Will there be a land acquisition for the project? If yes, will there be a need for land compensation?  |  |
| Does the site have the necessary supporting infrastructure? Mention them, e.g. road, railway, water supply, electricity or any other energy source, etc.                           |  |
| <b>Technical and operational feasibility</b>   |  |
| Has the project site or options for the site options been identified?  |  |
| Is the preliminary engineering plan practical?   |  |
| Is the operations and maintenance plan practical?  |  |
| Have the major technical and operational risks to the project been identified?   |  |
| Has an impact and management strategy been prepared to deal with the major technical and operational risks to the project?   |  |
| Based on the preliminary analysis, does the contracting authority consider the project concept to be practical and expected to be technically feasible?                            |  |
| <b>Legal feasibility</b>   |  |
| Does the project relate to the mandate of the contracting authority and supported/allowed by the laws?   |  |
| Will there be any risk related to legal issues?  |  |
| <b>Environmental and social safeguard assessments</b>  |  |
| Has a scoping social impact assessment been done? Were any serious issues raised?  |  |
| Has a scoping environmental assessment been done? Were any serious issues raised?  |  |
| Are the social and environmental impacts of the project likely to be mitigated?  |  |
| Would mitigating the expected social and environmental effects entail financial costs? If so, the costs should be added to the technical analysis.                                 |  |
| <b>Financial and economic viability</b>  |  |
| What economic benefits/impacts are expected of the project? For example, job creation  |  |
| Have all major project cost components (capital, operations, maintenance) of the technical scope of the project been estimated?  |  |
| What is the preliminary funding requirement (rough estimate of the capital expenditure or project cost)?   |  |
| Are the assumptions on major project cost components reasonable? Can they be justified based on a rationale?   |  |
| Does the project expect to generate enough revenue to cover its costs? What is the expected revenue?   |  |
| Has a preliminary market demand analysis been done? (Tariffs, Volume)  |  |
| Are the assumptions on tariff/prices reasonable? Can they be justified based on a rationale?   |  |
| Will the users be willing to pay the proposed tariff/ prices?  |  |
| Have preliminary financial projections been prepared?  |  |
| Has an estimate of required financial support from the public sector been made?  |  |
| Have the major financial and commercial risks to the project been identified?  |  |
| Have the likely economic benefits generated by the project been identified?  |  |
| Based on the preliminary analysis, does the contracting authority consider the project concept to be financially and economically viable?  |  |
| Has a strong rationale and recommendation been made by the contracting authority in the preliminary assessment?  |  |
| <b>Screening for PPP suitability</b>   |  |
| Has the project been screened for PPP suitability, including (1) assessing how supportive the PPP environment is and (2) how suitable the project is for PPP? What was the result? |  |
| Have the main barriers to PPP that were raised in the screening been clearly identified?   |  |

|  |  |
|--|--|
| Has a preliminary risk management plan been prepared to address these barriers?  |  |
| <b>Possible arrangements for private sector participation</b>  |  |
| Has the role of the private sector (direct or indirect investment, indicative PPP mode, etc.) been identified?                                   |  |
| Has an indicative project structure or contractual framework for the PPP arrangement been prepared?  |  |
| In selecting a project structure, were different project structures / PPP models considered and evaluated? Was public financing also considered? |  |
| Will the procedure encourage competition in the private sector?  |  |
| Has the major legal documentation required to allow participation of the private partner(s) been identified?                                     |  |
| <b>Next steps</b>  |  |
| Has an estimate of resources (financial, external expertise) to complete the feasibility study and selection of PPP been made?                   |  |
| Are budgets available for the above?   |  |
| Have all the parties that will be responsible in the next steps, been identified? Such as within sponsor agency and other parties/stakeholders.  |  |
| Have the roles and responsibilities of involved parties been prepared?   |  |
| Is there an agreement amongst involved parties in undertaking their respective roles and responsibilities?                                       |  |
| Has the time frame required for completing the feasibility study and selection of PPP been estimated?  |  |
| Is the time frame reasonable and practical?  |  |

## 4.1.2 CLIMATE RISK SCREENING

The pre-feasibility study should also include a climate risk screening, which supplements the standard PPP assessment outlined above. At this phase, when detailed information on a project is typically not available, a high-level, indicator-based screening approach can be used by the Technical Committee to highlight a project's potential climate impacts and confirm its alignment with Cabo Verde's NDC and NAP. This should inform how the project is designed and built to mitigate and/or adapt to the identified climate impacts. The goal of the climate screening at this stage includes the:

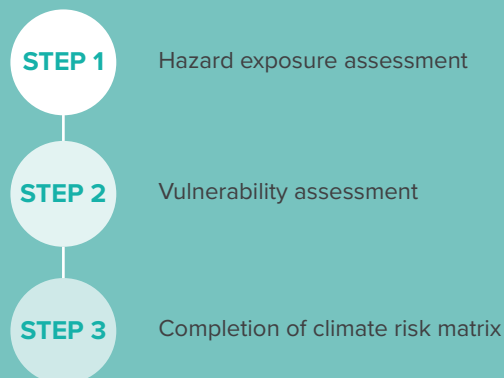
- Preliminary evaluation of the climate hazard environment.
- Assessment of the overall climate-risk level of the project.
- Identification and appraisal of adaptation, resilience solutions.
- Guidance for contracting authorities on whether climate change-related risks or opportunities make the project attractive for PPP procurement method.
- Early identification of risks and evaluation of risk reduction methods are crucial to make informed decisions and allocate risks effectively.

During this phase, qualitative data primarily informs the climate screening, with detailed quantitative re-evaluation scheduled for subsequent phases as more data becomes available. This evaluation is crucial for technical staff and decision-makers to understand how the project contributes to the country's climate-resilient development pathway. Depending on the assessment results, a decision must be made whether to revise the project's scope to ensure alignment or to enhance its design to better incorporate climate-change considerations.

Understanding the climate risks involved in the project can help project teams determine:

- Whether to pursue the project at all (a project with high climate risk might be deemed too risky)
- Whether the project location and/or scope needs to be changed to minimize the risk
- Whether the climate risks affect the decision to pursue the project as a ppp
- Which in-depth analysis is required during the feasibility study phase, informing the need for requirements regarding time, expertise, and budget.

A climate risk screening is split into the following sub-steps:



#### 4.1.2.1 Step 1: Hazard Exposure Assessment

This step assesses the level of exposure of a project to natural hazards. It provides the Technical Committee with a structured decision-making framework, by utilizing publicly available information/tools. Technical Committees are encouraged to use ThinkHazard!<sup>6</sup> to help with this exposure screening for the specific location of the proposed project. The image below indicates the various hazard types for which information is available in the Praia region of Santiago as an example. Similar information is available for all of Cabo Verde’s main islands.

The key question that this step tries to answer is: What is the likelihood of occurrence of various climate risk events (hazards) in the project area now, and in the future?

Figure 5: ThinkHazard! Example for Praia<sup>7</sup>

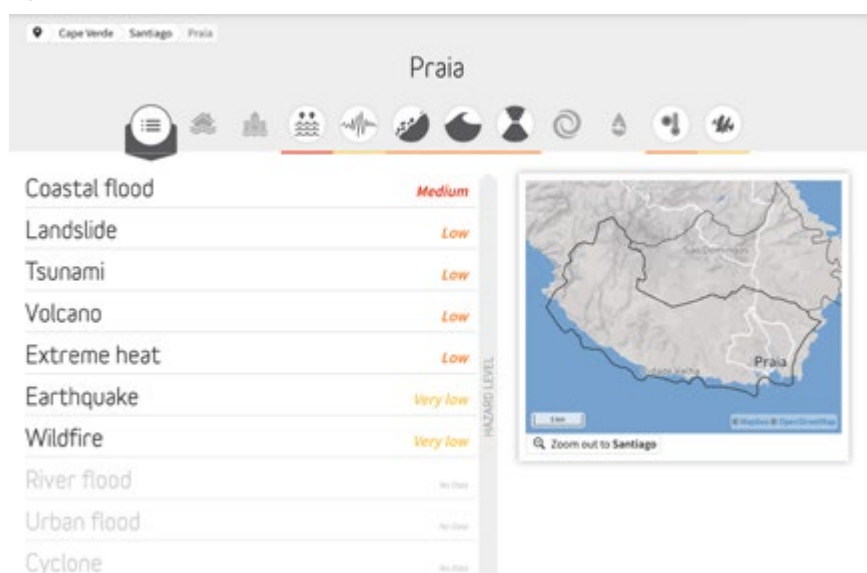


Table 3: Hazards Assessment Checklist

| Hazards        | Rating from ThinkHazard! |
|----------------|--------------------------|
| River flood    |                          |
| Urban flood    |                          |
| Coastal flood  |                          |
| Landslide      |                          |
| Volcano        |                          |
| Hurricane      |                          |
| Tsunami        |                          |
| Water scarcity |                          |
| Extreme Heat   |                          |

6 For Cabo Verde’s Climate Risk Scoring visit: <https://thinkhazard.org/en/report/47-cape-verde>  
7 <https://thinkhazard.org/en/report/12823-cape-verde-santiago-praia>

With regard to **scoring methodology**<sup>8</sup>, Technical Committees are encouraged to rely on the *ThinkHazard!* Tool as shown in Table 4, which will provide a scoring of a hazard for a particular project location based on the following methodology.

Table 4: *ThinkHazard!* Methodology

| Exposure Level        | Definition   |
|-----------------------|--|
| <b>Not Applicable</b> | No dataset covering the chosen location is currently available in ThinkHazard!   |
| <b>Very Low</b>       | Available data suggest that potentially damaging effects are unlikely to occur, on average, in the project or human lifetime. Hazard has been classified based on long-term averages, and there is still potential that damaging events could occur in this timeframe.   |
| <b>Low</b>            | Potentially damaging events are less likely to occur within the project or human lifetime but are still possible. Measures to mitigate the hazard and risk would be prudent at critical locations. Hazard has been classified based on long-term averages, and there is still potential that damaging events could occur in this timeframe.                                    |
| <b>Medium</b>         | Technical Committees should be aware of potentially damaging effects of this hazard for the project location. Potentially damaging events can be expected to occur within the project or human lifetime and measures to mitigate the hazard and risk should be considered. For hydro-meteorological hazards, damaging effects could occur frequently in that timeframe.        |
| <b>High</b>           | Technical Committees should be highly aware of potentially severe damage from this hazard for the project location. Without taking measures to mitigate the hazard and risk, high levels of damage can be expected to occur within the project or human lifetime (and potentially frequently in that timeframe, for hydro-meteorological hazards, e.g., floods, extreme heat). |

#### 4.1.2.2 Step 2: Vulnerability Assessment

The concept of vulnerability involves two key aspects: sensitivity or susceptibility to harm and the lack of capacity to cope and adapt.

- Sensitivity assessment entails evaluating project features like structural type, technical integrity, and dependencies between project assets to determine susceptibility to hazards.
- Capacity assessment involves considering non-structural factors like emergency management and evacuation plans to evaluate the project's ability to cope and adapt.

In Cabo Verde, climate change can modify the risk profile of hazards, necessitating a thorough assessment that considers

potential threats not just under current conditions but also throughout the project's lifespan. This holistic approach ensures that evolving climate impacts are adequately addressed. Qualitatively evaluating the project's vulnerability to specific hazards involves assessing factors like structural resilience, emergency response capacities, and the availability of alternative solutions.

The key question it tries to answer is: How significant would the damage to the project be if any of the climate risk events (hazards) would occur? This assessment helps identify potential risks and informs decision-making processes during project selection and planning phases.

Table 5: *Sensitivity Assessment Checklist*

| Sensitivity Assessment  |          |
|---|----------|
| Question  | Response |
| What are the structural types and technical integrity of the project components?                                  |          |
| Are there any dependencies on critical resources or services that may be affected by climate hazards?             |          |
| How does the project's design account for potential climate-related impacts on its functionality and performance? |          |
| What are the bearing capacities and thresholds of the infrastructure?   |          |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

<sup>8</sup> For more information on ThinkHazard! Hazard Classification visit: <https://gfdrr.github.io/thinkhazardmethods/#classifying-hazard-levels>

Table 6: Capacity Assessment Checklist

| Capacity Assessment   |          |
|---|----------|
| Question  | Response |
| Are there emergency management plans in place to address climate related risks?           |          |
| Does the project have the ability to reconstruct or recover from climate-related damages? |          |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

The following template will help the Entity Responsible for PPP determine whether a hazard common to Cabo Verde (e.g., drought), has an impact for the project being assessed.

Table 7: Hazards Assessment Impact Checklist

| Hazards        | Significance of damage if climate risk event occurs (high, med, low) | Description of potential damage to be incurred by onsite asset, inputs, outputs, links |
|----------------|--|--|
| River flood    |  |  |
| Urban flood    |  |  |
| Coastal flood  |  |  |
| Landslide      |  |  |
| Tsunami        |  |  |
| Volcano        |  |  |
| Hurricane      |  |  |
| Water scarcity |  |  |
| Extreme Heat   |  |  |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

### 4.1.2.3 Step 3: Climate Risk Matrix

This final screening level, climate risk screening template, helps project teams come to a high-level conclusion on whether a project is at a low, medium, or high risk for impacts from climate change. The key question it tries to answer is: What is the project's

risk profile for each of the hazards and combined? This tool builds on the information and outputs from the previous checklists in this section.

Table 8: Climate Risk Matrix Tool

| VULNERABILITY | HAZARD- EXPOSURE   |        |  |
|---------------|--|--------|--|
|               | Low  | Medium | High   |
| Low           | The project is not exposed nor is vulnerable to a specific hazard/risk |        |  |
| Medium        |  |        |  |
| High          |  |        | The project is exposed and highly vulnerable to a specific hazard/risk |



The following table highlights steps to be taken by the Technical Committee for each risk rating category and provides guidance for the Technical Committees on when and how to further examine climate and geophysical risks.

Table 9: Guidance on Risk Rating and Next Steps

|             |   |
|-------------|---|
| High Risk   | For hazards identified as High Risk, the Technical Committee is strongly encouraged to conduct a more detailed risk assessment and to explore measures to manage or reduce those risks.   |
| Medium Risk | For hazards identified as Medium Risk, the Technical Committee is encouraged to build on the screening through additional studies, consultation, and dialogue.  |
| Low Risk    | If the Technical Committee is confident that climate and geophysical risks pose Low Risk to the project, continue with project development. However, this is a high-level risk screening and thus, monitoring the climate and geophysical risks to the project is crucial as it is developed and implemented. |
| Poor Data   | The Technical Committee must gather more information to improve its understanding of climate and geophysical hazards and their relation to the project.   |

Adapted from IDB.2020. Climate Resilient Public Private Partnerships



### 4.1.3 REVIEW PROCESS

Once the pre-feasibility study (including the preliminary PPP assessment and climate risk screening) is completed, the Technical Committee will submit them to Entity Responsible for PPP for technical review. The Entity Responsible for PPP is responsible for using the information within the pre-feasibility study to complete the pre-feasibility study review checklist below.

Table 10: Pre-Feasibility Study Phase Review Checklist

| Criterion   | Definition   | Question to check if the project meets the criteria  |                      |
|---|--|--|----------------------|
| <b>Project is Viable</b>                          |  |  |                      |
| <b>Effective in meeting government objectives</b> | The project is an effective method of meeting government objectives, and is consistent with the sector's strategy and relevant development plans.  | Is the project identified in a sector plan? (please attach)  | <b>Yes/No</b>        |
|   |  | Is the asset or service one that the Government has a continuing interest in ensuring is provided, but does not necessarily need to provide itself?                    | <b>Yes/No</b>        |
|   |  | If neither of the above, please attach an explanation of how the project will otherwise meet sector objectives.  | Not applicable (n/a) |
| <b>Technically feasible</b>                       | The project can be implemented technically, as planned, using known and proven technologies and engineering methods.   | Does a prefeasibility study indicate technical feasibility? (please attach).   | <b>Yes/No</b>        |
|   |  | If not, please attach an explanation of why you believe the project is technically feasible.   | n/a                  |
| <b>Legally feasible</b>                           | All aspects of the project are permitted by law, the parties involved in the project are legally empowered to do what they will need to do under the project, and the agreements that will be required can be made legally binding on all parties concerned.   | Has a legal analysis been conducted that indicates feasibility? (please attach).   | <b>Yes/No</b>        |
|   |  | If not, attach an explanation of how the proposed project and PPP structure align with sector and other applicable laws.   |                      |
| <b>Environmentally compliant</b>                  | The environmental impacts of the project are in compliance with environmental laws and regulations, or can gain the necessary permits, etc. to become compliant.   | Has an initial environmental impact assessment been conducted that indicates likely environmental compliance? (please attach).   | <b>Yes/No</b>        |
|   |  | If not, please provide a list of the project's potential environmental impacts and indicate why you expect it to be environmentally compliant.                         | n/a                  |
| <b>Socially sustainable</b>                       | All substantial social impacts of the project (as defined for consideration as a PPP) have been assessed, including providing individuals and groups impacted ample opportunity to provide feedback and voice concerns, mitigation solutions have been incorporated into the PPP contract as appropriate, and the likelihood of any one group blocking or undermining the project successfully is low. | Has a social impact assessment been conducted that has identified affected parties, and indicates social sustainability of the project? (please attach).               | <b>Yes/No</b>        |
|   |  | If not, attach a list of potential social impacts, including the parties that would be affected, and describe why you think the project would be socially sustainable. |                      |
|   |  | Please include an explanation of how the potential social impacts could be managed and what public consultation strategies are planned.                                |                      |
|   |  | Please attach an explanation on any site-specific issues (such as land claims, squatters, etc.), and mitigation strategies.  |                      |
| <b>Economically viable</b>                        | An economic analysis of the project shows the expected economic benefits exceed the expected economic costs, and that the project is the least cost way of achieving the benefits that is practical and feasible.  | Has an economic analysis of the project been conducted that indicates the project is economically viable? (please attach).   | <b>Yes/No</b>        |
|   |  | If not, attach a list of expected economic benefits and costs, and explanation of why the project is likely to be cost-benefit justified and least cost.               |                      |

|  |   |   |               |
|--|---|---|---------------|
| <b>Climate Resilient</b>                             | A climate risk screening has been conducted and shows that the project either has low climate risks, or if it has medium to high climate risks, appropriate mitigation measures have been proposed. | Has a climate risk screening been conducted? (Please attach).   | <b>Yes/No</b> |
| <b>PPP represents a genuine business opportunity</b> |   |   |               |
| <b>PPP is a viable “commercial project”</b>          | The PPP's revenues cover costs and provide a rate of return that is sufficient for the private sector to consider the project commercially viable.  | Do the revenues of the proposed PPP cover its costs and provide a sufficient rate of return? (Please attach revenue and cost estimate). | <b>Yes/No</b> |
|  |   | If not, please explain why you think the project would be commercially viable.  |               |
| <b>Market has sufficient capacity and appetite</b>   | There is sufficient market interest to attract and generate competitive tension amongst private parties that have the capacity and resources to deliver the project.                                | Has an initial market sounding been conducted that indicates private sector interest?   | <b>Yes/No</b> |
|  |   | If not, please explain why you think there would be sufficient private sector interest?   |               |

In addition to the pre-feasibility study review checklist, the Entity Responsible for PPP is also responsible for completing the comparative assessment checklist below. This comparative assessment is a tool to enable the Entity Responsible for PPP to identify any changes in key elements of project characteristics,

and the comparative assessment checklist will be updated by the Entity Responsible for PPP as the project moves through subsequent phases of the PPP project cycle.

Table 11: Phase 2 Pre-Feasibility Study Phase Comparative Assessment

< To be completed and updated at the end of the pre-feasibility phase, the feasibility study phase, prior to the launch of the tender, and prior to signing of the PPP contract >

| <b>Project Name:</b>                              |  |  |   |  |   |
|---|--|--|---|--|---|
| <b>Criterion</b>                                  | <b>Definition</b>  | <b>Project Cycle Phase</b>   |   |  |   |
|   |  | <b>Pre-Feasibility Study Date:</b>   | <b>Feasibility Study Date:</b>  | <b>Prior to the Launch of the Tender</b>   | <b>Prior to Contract Signing</b>  |
| <b>Project is Viable</b>                          |  |  |   |  |   |
| <b>Effective in meeting government objectives</b> | The project is an effective method of meeting government objectives, and is consistent with the sector's strategy and relevant development plans | <i>The project, as proposed for consideration as a PPP, is consistent with the sector's overall strategy, relevant development plans and integrates (as appropriate) with existing and planned assets and services</i> | <i>Unchanged</i>  | <i>Unchanged</i>   | <i>Unchanged</i>  |
| <b>Technically feasible</b>                       | The project can be implemented technically, as planned, using known and proven technologies and engineering methods                              | <i>There is a reasonable expectation that the project is technically feasible, based on expert judgment or prefeasibility studies, which have considered the risks associated with climate change</i>                  | <i>A feasibility study, which has considered the risks associated with climate change, indicates that the project (as defined for consideration as a PPP) is technically feasible</i> | <i>The project defined in the tender specifications is materially the same as that assessed by the feasibility study</i> | <i>The project defined in the final PPP contract is materially the same as that assessed by the feasibility study</i> |

|                                  |  |  |   |  |   |
|----------------------------------|--|--|---|--|---|
| <b>Legally feasible</b>          | All aspects of the project are permitted by law, the parties involved in the project are legally empowered to do what they will need to do under the project, and the agreements that will be required can be made legally binding on all parties concerned  | <i>There is a reasonable expectation that the project is legally feasible, based on expert judgment or preliminary legal analysis</i>  | <i>A thorough legal due diligence of the feasibility study (as defined for consideration as a PPP) has assessed all legal issues having a bearing on the project, including reviewing all applicable laws and regulations, use rights, and (as appropriate) legalities of the project site, and indicates the project is legally feasible</i> | <i>The project defined in the tender specifications is materially the same as that assessed by the legal due diligence undertaken during the feasibility study</i>               | <i>The project defined in the final PPP contract is materially the same as that assessed by the legal due diligence undertaken during the feasibility study</i>               |
| <b>Environmentally compliant</b> | The environmental impacts of the project are in compliance with environmental laws and regulations, or can gain the necessary permits, etc. to become compliant  | <i>There is a reasonable expectation that the project is environmentally sustainable, not only under current climate conditions but also considering future climate conditions, based on expert opinion or initial environmental impact assessment</i>                         | <i>Environmental impact assessment(s) indicates that the project (as defined for consideration as a PPP) is, or is highly likely to be, in compliance with environmental laws</i>   | <i>The project defined in the tender specifications is materially the same as that considered in the environmental impact assessment undertaken during the feasibility study</i> | <i>The project defined in the final PPP contract is materially the same as that considered in the environmental impact assessment undertaken during the feasibility study</i> |
| <b>Socially sustainable</b>      | All substantial social impacts of the project (as defined for consideration as a PPP) have been assessed, including providing impacted individuals and groups ample opportunity to provide feedback and voice concerns, and mitigation solutions have been incorporated into the PPP contract as appropriate | <i>There is a reasonable expectation that the project is socially sustainable, not only under current climate conditions but also considering future climate conditions</i>  | <i>A social impact assessment and public consultation indicate the project (as defined for consideration as a PPP) is socially sustainable</i>  | <i>The project defined in the tender specifications is materially the same as that considered in the social impact assessment undertaken during the feasibility study</i>        | <i>The project defined in the final PPP contract is materially the same as that considered in the social impact assessment undertaken during the feasibility study</i>        |
| <b>Economically viable</b>       | An economic analysis of the project shows the expected economic benefits exceed the expected economic costs, and that the project is the least cost way of achieving the benefits that is practical and feasible   | <i>There is a reasonable expectation that the project is economically viable, based on expert judgment or an economic prefeasibility study, which analyzed costs and benefits of project in the context of current climate conditions as well as future climate conditions</i> | <i>An economic analysis of the project (as defined for consideration as a PPP) indicates the project is economically viable, which analyzed costs and benefits of project in the context of current climate conditions as well as future climate conditions</i>   | <i>The project defined in the tender specifications is materially the same as that considered in the economic analysis undertaken during the feasibility study</i>               | <i>The project defined in the final PPP contract is materially the same as that considered in the economic analysis undertaken during the feasibility study</i>               |

|                          |  |  |  |   |   |
|--------------------------|--|--|--|---|---|
| <b>Climate Resilient</b> | A climate risk screening has been conducted and shows that the project either has low climate risks, or if it has medium to high climate risks, appropriate mitigation measures have been proposed | <i>Based on a climate risk screening, the project has been shown to be either low climate risk, or in the case of medium to high-risk mitigation measures and additional climate analysis proposed</i> | <i>Either project was deemed low climate risk in screening level assessment, or a full climate risk assessment has been conducted and appropriate mitigation measures proposed which ensure that project can withstand any climate risks to which it is vulnerable</i> | <i>The climate risk profile of the project has not materially changed since the feasibility study</i> | <i>The climate risk profile of the project has not materially changed since the feasibility study</i> |
|--------------------------|--|--|--|---|---|

At the conclusion of the Entity Responsible for PPP’s review of the pre-feasibility study (including the preliminary PPP assessment and climate risk screening) and following preparation of the pre-feasibility study review checklist and the pre-feasibility study phase comparative assessment, the Entity Responsible for PPP will submit all documentation to the MF and provide technical recommendations.

The MF will deliberate on (i) the approval of the pre-feasibility study and (ii) whether a public hearing is required. Projects approved by the MF are included in the Annual PPP Plan and may proceed to the next phase, which will either be the public hearing phase or the feasibility study phase. Projects rejected by the MF may be sent back to the technical committee for further study.

## 4.2 PHASE 3: PUBLIC HEARING

The third phase in the PPP project cycle is the public hearing, which is **optional** dependent on a recommendation from the MF as part of the review process at the appraisal stage. A public hearing is held for projects where the MF determines that feedback from citizens, private partners, public entities, and civil society would be particularly beneficial. The public hearing is organized by the Entity Responsible for PPP and supported by the contracting authority.

### 4.2.1 HOLDING A PUBLIC HEARING

The public hearing includes meeting(s) held open to the general public. The Entity Responsible for PPP will publish the pre-feasibility study and any other relevant material on the MF’s website in advance of the meeting(s). At the meeting(s), the Entity Responsible for PPP and the respective public entity will present the key elements of the PPP project and the MAA will also present key climate change considerations relevant to the project. Anyone present at the meeting is able to ask questions about the project and provide feedback. The Entity Responsible for PPP will also enable feedback to be submitted in written by email for the duration of the public hearing phase (e.g., 30 days).

### 4.2.2 REVIEW PROCESS

The Entity Responsible for PPP will prepare meeting(s) minutes, which will be made public on the MF’s website. The Entity Responsible for PPP will also create a matrix document of feedback received, including non-binding responses to all comments and questions, and confirmation of the acceptance or rejection of any feedback in relation to the project’s design. This matrix, which consolidates the public hearing phase, will also be published on the MF’s website.

At the conclusion of the public hearing phase, the project returns to the Technical Committee, which will consider the feedback received and incorporate as necessary into the subsequent feasibility study phase.

## 4.3 PHASE 4: FEASIBILITY STUDY

The third phase in the PPP project cycle is the feasibility study. The feasibility study is a multidisciplinary study that provides detailed due diligence to support the preparation and eventual structuring of the PPP contract. It includes the assessment of technical, financial, economic, legal, and environmental and social aspects of the project through a climate-informed lens.

### 4.3.1 FEASIBILITY STUDY OBJECTIVES

Potential PPP projects must undergo a comprehensive appraisal process, through a feasibility study, to determine whether or not to pursue the project as a PPP. Typically, there are five key criteria that the feasibility study could consider:

#### Project Feasibility and Economic Viability

This seeks to determine whether the underlying project makes sense, irrespective of the procurement model. The feasibility study should ensure that the project is technically feasible, and the technology required to implement the project is easily available in the market and unlikely to become obsolete in the medium term. In addition, economic appraisal is required to check that the project is cost-benefit justified, and represents the least-cost approach to delivering the expected benefits;

#### Commercial Viability

This seeks to determine whether the project is likely to attract good-quality sponsors and lenders by providing robust and reasonable financial returns. This is subsequently confirmed through the tender process;

#### Value for Money (VfM)

This seeks to determine whether developing the proposed project as a PPP can be expected to best achieve VfM compared to other options. This includes comparing against public procurement (where that would be an option) and other possible PPP structures, and could include the development of a public sector comparator. Assessment of VfM requires an estimation of whole-of-life cost of the project if implemented under a PPP model compared to if implemented by government under traditional procurement. This will demonstrate if the proposed PPP model provides the best VfM;

#### Fiscal Implications

This seeks to determine whether the project's overall revenue requirements are within the capacity of users and the public entity to pay for the infrastructure service. This involves checking the fiscal cost of the project—both in terms of regular payments and fiscal risk—and establishing whether this can be accommodated within prudent budget and other fiscal constraints;

#### Project Management

This seeks to determine whether the public entity has the authority, capacity, and fiscal resources to prepare and tender the project, and to manage the contract during its term <sup>9</sup>.

<sup>9</sup> Further guidance on PPP appraisal, including the preparation of a feasibility study, can be found in: World Bank Group, PPP Reference Guide 3.0, 2017 (<https://openknowledge.worldbank.org/bitstreams/27e880bf-7e5c-5aee-877c-275ctb9146f0/download>) and Global Infrastructure Hub, Leading Practices in Governmental Processes Facilitating Infrastructure Project Preparation, 2019 ([https://cdn.github.org/umbraco/media/2344/gih\\_project-preparation\\_full-document\\_final\\_art\\_web.pdf](https://cdn.github.org/umbraco/media/2344/gih_project-preparation_full-document_final_art_web.pdf)).

This feasibility study will involve a rigorous process of identifying and gathering complete qualitative and quantitative information about the proposed PPP project. This information must be synthesized and analyzed to determine if the proposed PPP project is technically, economically and financial feasible. It should contain legal, demand/market, technical, economic, financial/commercial and environmental and social assessment including the following elements:

- Analysis of the PPP project structuring options;
- Technical evaluation and financial analysis
- Description of the project and how it will be financed;
- Demonstration of the project’s public interest;
- Justification for the chosen PPP model;
- Proof of the project’s affordability and assessment of fiscal risks arising from the project in light of the government’s multiannual financial programming;
- Quality and assessment of the assets that are transferred to the public entity at the end of the duration of the contract;
- Environmental impact statement (if required by law).

The PPP Decree-Law also requires that each PPP project must incorporate climate considerations at project appraisal stage. To support this, the following section provides detailed guidance on how to prepare a climate-informed feasibility study.

### 4.3.2 CLIMATE INFORMED FEASIBILITY STUDY

At this phase of the PPP cycle, climate considerations are paramount to the project’s assessment, and must be incorporated into the analysis of the project’s technical and financial feasibility. It is crucial to accurately assess climate-related risks and design appropriate adaptation and resilience measures. As such, this chapter includes templates for detailed assessments of climate risks, including advanced hazard modelling, while considering internal and external risk factors. Costs and benefits of climate considerations are an integral element of the project’s feasibility.

A climate-informed feasibility study is split into two modules:

**Module 1** Addresses climate change impact on the project focusing on adaptation.

STEP 1

Identify climate hazards

STEP 2

Characterization of internal risks

STEP 3

Characterization of external risks

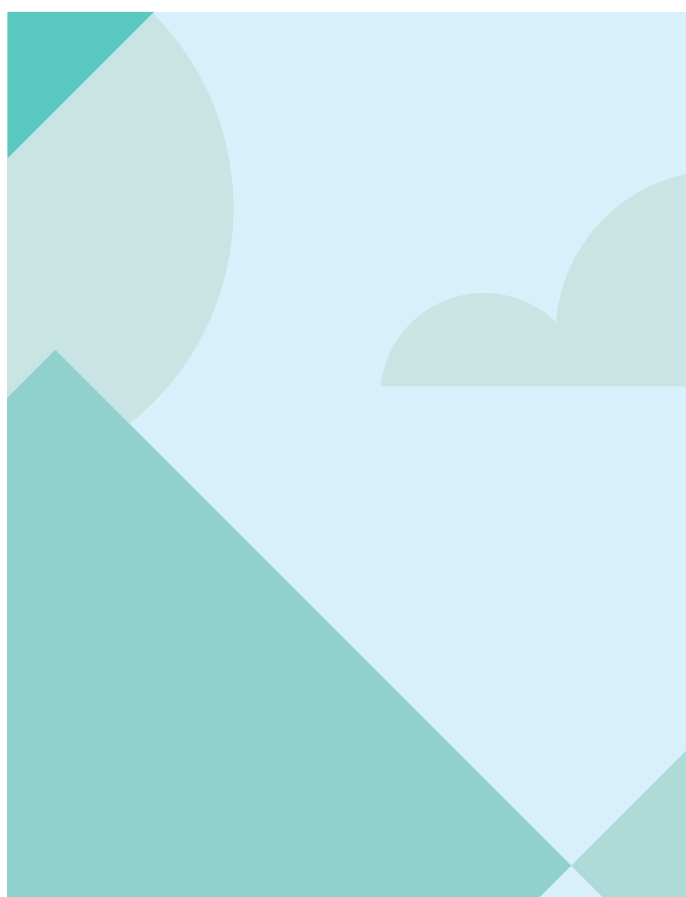
**Module 3** Provides instructions for updating financial analyses to maintain bankability while integrating climate measures.

STEP 1

Cost-Benefit Analysis (CBA), VfM and affordability Analysis

STEP 2

Assess bankability and commercial feasibility



#### 4.3.2.1 Module 1: Climate change impact on the PPP project

This first module focuses on adaptation and emphasizes the importance of understanding the impact of climate change on the PPP projects. It aims to guide the Technical Committee in developing comprehensive climate risk assessments for PPP projects, including quantitative hazard analysis and assessment of internal and external risks. The Technical Committee is prompted to explore dependencies on associated infrastructure and conduct future landscape mapping activities.

Climate risk assessment is expected to be data-driven and computationally demanding, requiring multidisciplinary teams with expertise in climate and risk analysis.

At the feasibility study phase, the Technical Committee must expand the climate risk screening conducted during the pre-feasibility study phase, incorporating quantitative climate change modeling and scenario analysis in all aspects of the feasibility study methodology. This includes the integration of the results from climate risk assessments into feasibility studies and cost-benefit analyses, not only by including the potential damage from these risk events when they occur, but also the cost of climate risk mitigation measures. The incorporation of such risks in the appraisal stage may also result in changes to design specifications during construction as well as disaster risk management plans for the operations phase.

##### 4.3.2.1.1 Step 1: Identify Climate Hazards

This module involves conducting a thorough analysis of climate hazards projected for future periods, focusing on selected climate scenarios relevant to the lifespan of PPP projects in Cabo Verde. The analysis encompasses both direct hazards, such as extreme temperatures, and subsequent hazards, like fire risks resulting from heat waves. It is essential to engage climate experts to navigate climate models and data effectively. This activity should be supported by the MAA and/or the Cabo Verde's National Institute of Meteorology and Geophysics.

Comparing climate projections with historical observations is crucial to evaluate reliability and address any systematic errors. While Regional Climate Models (RCMs) offer detailed data, statistical downscaling techniques may be employed if RCM data is limited or unavailable. Cabo Verde's climate hazard and

vulnerability maps should be consulted when available. The outcome of this analysis provides a set of climatic variables that will inform the selection and application of relevant indicators for PPP projects in Cabo Verde.

This module will aim to answer the following questions:

- *Project-specific characteristics: Which are the project's assets under risk evaluation?*
- *Climate hazards: Which climate scenarios are taken into account in the climate risk assessment? What are the exact metrics of each hazard related to the project for the examined climate scenarios?*

For this step, publicly available data from sources such as World Bank Climate Change Knowledge Portal<sup>10</sup> can be employed to analyze the following climate scenarios and climate hazards.

<sup>10</sup> <https://climateknowledgeportal.worldbank.org/>



Table 12: Temperature Projections Checklist

| Temperature Projections |           |           |           |           |
|-------------------------|-----------|-----------|-----------|-----------|
| Units                   | 2020-2039 | 2040-2059 | 2060-2079 | 2080-2099 |
| Scenario                |           |           |           |           |
|                         |           |           |           |           |
|                         |           |           |           |           |

Table 13: Precipitation Projections Checklist

| Precipitation Projections |           |           |           |           |
|---------------------------|-----------|-----------|-----------|-----------|
| Units                     | 2020-2039 | 2040-2059 | 2060-2079 | 2080-2099 |
| Scenario                  |           |           |           |           |
|                           |           |           |           |           |
|                           |           |           |           |           |

#### 4.3.2.1.2 Step 2: Characterization of Internal Risks

During the pre-feasibility phase, the Technical Committee identified potential hazardous events for the project's location. Now, at the feasibility study phase the Technical Committee must assess if the project will face climatic stress or environmental changes during or after such events. Using predefined indicators, the Technical Committee should evaluate the project's exposure to hazards through modelling analysis, considering factors like flood scenarios using hydrological models. Vulnerability assessment examines the project's ability to withstand hazards based on inherent and systemic characteristics identified earlier. Weights are applied to vulnerability factors to determine overall vulnerability per hazard. Risk components are consolidated into baseline hazard stress tests, producing an ensemble of potential risks affecting the project, considering interactions between risks.

In this section, the Technical Committee should seek to answer the following questions:

- *Project Exposure:* Which assets of the project are in direct contact with the hazardous event?
- *Project Vulnerability:* If a hazardous event occurs and the project is exposed, what is the project's overall susceptibility and recovery capability to the hazard?
- *Climate Risk:* What is the overall climate risk of the project for the investigated hazards? What is the associated uncertainty in the calculations, e.g., is the influence of different climate models and scenarios significant?

#### 4.3.2.1.3 Step 3: Characterization of External Risks

This step encourages the Technical Committee to envision future scenarios where the project faces external climate-related risks during its lifecycle. The Technical Committee should identify potential hazards and their impacts on exposure, vulnerability, and infrastructure demand, considering the PPP contract duration or the entire infrastructure lifecycle.

Key actions include:

- *Identifying dependencies* with associated infrastructure exposed to climate risks,
- *Assessing relationships* with social, physical, technological, and policy systems influenced by climate change, and considering risk interactions.

This analysis complements existing information on cost-benefit and non-climate risk assessments. The table below encompasses some key questions to help the Technical Committee in considering the external risks associated with the project, at this stage.

Table 14: Assessment of External Risks Checklist

| Topic                                      | Question  | Response/ Description |
|--|---|-----------------------|
| <b>Identification of Hazards</b>           | Have all potential climate-related hazards that could indirectly impact the project infrastructure been identified?   |                       |
|  | How might external hazards, such as changes in climate patterns, extreme weather events, or sea-level rise, affect the project site and surrounding areas?                          |                       |
|  | Are there any secondary hazards triggered by external factors, such as landslides induced by heavy rainfall or infrastructure damage caused by wildfires?                           |                       |
| <b>Assessment of Exposure</b>              | How exposed is the project infrastructure to external hazards, considering its geographic location and proximity to vulnerable areas?   |                       |
|  | Are there specific external hazards that pose a higher risk of exposure to the project compared to others?  |                       |
|  | What are the potential consequences of external hazards on the project's physical assets, operations, and surrounding environment?  |                       |
| <b>Evaluation of Vulnerability</b>         | What external factors contribute to the vulnerability of the project infrastructure, such as reliance on external resources or dependencies on interconnected systems?              |                       |
|  | How might external hazards exacerbate existing vulnerabilities within the project infrastructure?   |                       |
| <b>Consideration of Lifecycle Duration</b> | Will the analysis of external risks and dependencies cover the entire duration of the PPP contract or extend beyond to encompass the entire infrastructure lifecycle?               |                       |
|  | Are there specific phases of the infrastructure lifecycle where external risks and dependencies are more pronounced, requiring targeted mitigation measures?                        |                       |
| <b>Estimation of Infrastructure Demand</b> | How might changes in external conditions, such as population dynamics or economic trends influenced by climate change, affect the demand for project infrastructure services?       |                       |
|  | Are there anticipated shifts in demand for project services due to changes in external factors, such as increased migration to safer areas or shifts in economic activity patterns? |                       |
| <b>Integration of Risk Management</b>      | How will the understanding of external risks and dependencies be integrated into the project's risk management strategy?  |                       |
|  | What mechanisms will be put in place to monitor and adapt to changes in external conditions throughout the project lifecycle?   |                       |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

Once the key climate risks are identified, it will be necessary to identify and appraise the resilience options that could mitigate these climate risks. Climate adaptation strategies should be developed to enhance project's resilience to climate risks.

“Adaptation strategy” refers to resilience measures, that is aiming to reduce the damage, loss, and potential disastrous consequences generated by the climate stressing on the infrastructure. It may include (i) prevention measures that reduce the likelihood of the consequences of the risk once a hazard is realized, (ii) preparation measures that reduce the severity of consequences once a

hazard is realized, and (iii) recovery measures that comprise all measures that can lead to efficient recovery of the infrastructure itself and its closely dependent human and natural environment from the impacts of climate hazards. Adaptation measures can be also “soft” or “no-regret” options, improving performance without significant design changes, or requiring infrastructure alterations or additional construction<sup>11</sup>. External consultants with engineering risk analysis expertise should be engaged for this assessment.

<sup>11</sup> However, adaptation measures will usually require significant modifications of the infrastructure dimensions/technical design to bear the increased climate-induced stressing or may even include construction of additional infrastructure (e.g., flood defenses for the protection of a coastal highway against the risk of sea-level rise). See WBG Climate Toolkits for Infrastructure PPPs (2022)

### 4.3.2.2 Module 2: Update and Refine CBA, VfM, and Affordability Analyses

During this module, the focus shifts to assessing the commercial feasibility and bankability of a PPP project following the review of climate actions and their technical feasibility. The analysis begins by examining how technical solutions for climate adaptation influence the project’s commercial viability. Essential supporting analyses, including CBA, are conducted to ensure the project’s overall feasibility. Updated pre-assessments obtained during the pre-feasibility phase are scrutinized with detailed data to evaluate cost-benefit balances and affordability under various climate scenarios. Bankability challenges arising from climate measures within the project structure are identified, with key questions presented to the structuring team, along with potential solutions to enhance bankability.

Ultimately, the goal is to develop a project structured within a PPP framework that effectively addresses climate risks underscoring the importance of expert involvement from technical and financial consultants throughout the process.

Module 3 builds includes the following two steps:



#### 4.3.2.2.1 Step 1a): Refine Cost-Benefit Analysis

In this module, conducting a comprehensive CBA is essential for determining the commercial feasibility of the project. Unlike the initial assessments during project identification, this analysis now incorporates updated and quantified data on climate risk scenarios, costs and benefits of risk reduction plans, and climate mitigation strategies. These inputs allow for a more advanced evaluation of CBA, VfM, and affordability. The CBA process involves quantifying all costs and benefits associated with climate actions, updating preliminary estimates from the pre-feasibility phase with the new data. This ensures a rigorous assessment of whether integrating climate actions into the PPP project remains justifiable from a commercial perspective. The table below serves as a template to guide the Technical Committee to incorporate climate outputs into the CBA process.

Table 15: Incorporating Climate Outputs into the CBA Process Checklist

| CBA Process Outline  | CBA sub-steps  | Incorporating climate assessment outputs  |
|--|--|---|
| <b>Projecting Financial Data with Conversion/ Adjustment</b> | Tax adjustment<br>Shadow prices and opportunity costs adjustment<br><br>Construction of the model Defining term and residual value | <ul style="list-style-type: none"> <li>• Only relevant to the extent there are tax incentives to a project when incorporating wider social benefit parameters</li> <li>• Adjust costs and benefits as would otherwise be done, but with including any probabilistic analysis of costs and uncertainties about climate hazard/risks and/ or costs of adaptation</li> <li>• Reflect on the cost estimates and the steps above in the model</li> <li>• Residual value requires adjustment as an asset that is unprotected by climate hazards that are worsening in the long term will decline in value, while an asset that incorporates protection mechanisms (adaptation) will retain higher residual value</li> </ul> |
| <b>Adding Externalities</b>                                  | Defining a list of externalities   | <ul style="list-style-type: none"> <li>• In the case of costs, externalities may be significant, especially in cases of essential infrastructure. These need to be carefully thought of, especially when assessing project alternatives without adaptation (e.g., in the case of a carbon emission reduction project, a social price of carbon may be applied)</li> <li>• In the case of benefits, externalities should be assessed and reflected (e.g., user safety, the certainty of availability, and of revenue)</li> </ul>   |

|  |  |   |
|--|--|---|
| <b>Adding other Socio-economic Benefits</b>                  | Monetizing/ inferring value for relevant benefits<br>Considering/ qualifying other unvalued benefits             | <ul style="list-style-type: none"> <li>• Reducing and managing the risk of climate disruptions increases private investment confidence (business, entrepreneurship, property). These gains need to be reflected and, to the extent possible, quantified</li> <li>• Resilience through the project has to be reflected (e.g., the prevention of flood or other short or mid-term disruptions to an area that an infrastructure asset covers will undoubtedly have significant impacts on the surrounding ecosystem and biodiversity)</li> <li>• Alignment with strategic climate objectives</li> </ul>   |
| <b>Relative Price Adjustments and Bias/Risks Adjustments</b> | Market imperfection<br>Other opportunity cost adjustments<br>Taxes   | <ul style="list-style-type: none"> <li>• Apply as would otherwise have been done</li> <li>• Consider cases whereby the cost of adaptation leads a project alternative to become more expensive than an alternative that was rejected as too costly but did not suffer from the same climate risks</li> <li>• In addition, consider alternative uses of the land and space that climate measures cover, if any, and apply such costs</li> <li>• Same as above, apply only to the extent that tax advantages are applicable when a project exceeds its purpose in social benefits</li> <li>• Consider the tax income gained from steady uninterrupted operations</li> </ul> |
| <b>Defining Base Case, Defining and Calculating EIRR</b>     | Discount rate definition and calculation of expected net Present Value – eNPV and Internal Rate of Return - eIRR | <ul style="list-style-type: none"> <li>• Consider adjusting discount rate for valuation depending on levels of certainty of cash flows (in case a project alternative has adaptation measures) and uncertainty of cash flows (in case a project has no adaptation measures). This needs to be aligned with the probabilistic analysis of events occurring to avoid “hurting” a project with uncertainty twice (one with a high probability of costs occurring and one with a high discount rate because of the uncertainty of cash flows)</li> </ul>  |
| <b>Incorporating Uncertainty: Sensitivities</b>              | Test the strength of the proposed business plan and present the effect of variations                             | <ul style="list-style-type: none"> <li>• As would otherwise be conducted</li> </ul>   |
| <b>Closing the Analysis and Reporting</b>                    | Include the assumptions and results in the screening report  | <ul style="list-style-type: none"> <li>• As would otherwise be conducted, however, highlighting in the report that resilience has been considered as one of the main criteria</li> </ul>  |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

#### 4.3.2.2.2 Step 1b) Value for Money

When conducting the VfM analysis, the Technical Committee must consider both quantitative and qualitative factors. Evaluating the range of costs quantitatively under different climate scenarios and technical solutions is essential, especially regarding their impact on affordability and PPP suitability. Qualitatively, the benefits of a PPP with climate measures should be refined, focusing on private sector innovation, eligibility for green financing, risk transfer, and other state-level objectives. The qualitative assessment complements the quantitative analysis and can influence the preference for a PPP approach, even if quantitative metrics

suggest otherwise. Both elements should be refined and updated to ensure a comprehensive VfM analysis, considering the effectiveness of technical solutions and their impact on project suitability and affordability.

The following are some key considerations and steps to guide the analysis.

Table 16: Guidance on the Use of Qualitative and Quantitative Assessment in VFM

| Quantitative Assessment                     |  |
|---|--|
| <b>Assess Cost Range</b>                    | <ul style="list-style-type: none"> <li>Evaluate costs under each climate scenario and technical solution for traditional procurement and PPP models.</li> <li>Consider variations in costs and their impact on project affordability and PPP suitability.</li> <li>Analyze scenarios where cost implications may lead to challenging affordability.</li> </ul> |
| <b>Quantify impact on affordability</b>     | <ul style="list-style-type: none"> <li>Determine if there is a net loss of value due to cost implications.</li> <li>Evaluate how cost variations affect the financial feasibility of the project, especially in high-risk scenarios.</li> </ul>  |
| Qualitative Assessment                      |  |
| <b>Refine Qualitative benefits</b>          | <ul style="list-style-type: none"> <li>Further refine qualitative benefits of a PPP with climate measures.</li> <li>Explore how PPPs enable innovative solutions from the private sector to reduce costs.</li> <li>Assess advantages of PPPs in proposing technical solutions for climate adaptation.</li> </ul>   |
| <b>Review Technical Solution Management</b> | <ul style="list-style-type: none"> <li>Examine how technical solutions are managed within the PPP context.</li> <li>Evaluate effectiveness of performance-based contracts in promoting innovation and lifecycle approaches.</li> </ul>   |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

#### 4.3.2.2.3 Step 1c): Affordability

The affordability analysis focuses on assessing whether integrating climate mitigation and resilience measures affects the affordability of the PPP project. It involves determining the contracting authority's total economic exposure to the project company and project, directly through payments and indirectly through contingent liabilities. Affordability assessments ensure that implementing climate actions does not strain government budgets or population income levels. The analysis considers the impact of climate strategies on project affordability, such as increased costs for the project company leading to higher

payments or fees for the contracting authority, balanced against reduced contingent liabilities. Key considerations include evaluating affordability over the long term, assessing the need for additional guarantees, and determining if cost increases can be tolerated by users without requiring subsidies. If the net impact does not harm affordability, further considerations are unnecessary beyond routine contracting authority procedures.

Table 17: Affordability Considerations Checklist

| Questions   | Responses |
|---|-----------|
| <i>For availability-based concessions</i>   |           |
| Does the extra cost to the project company for incorporating adaptation/resilience plans and the need for acquiring relevant insurances lead to an increase in the level of availability payments that is unaffordable over the long term to the government?                              |           |
| Based on the hazard analysis, are there government guarantees required that increase contingent liabilities to an intolerable level for the state?  |           |
| What is the level of reduction to the government's contingent liabilities by transferring this risk to the private sector? This is expected to mitigate the impact of any cost increases from the two previous questions.   |           |
| <i>For demand-based concessions</i>   |           |
| How much more will users pay in fees due to adding climate mitigation and adaptation plans to the project?  |           |
| Can such increase be tolerated by users in terms of their income levels, and, if not, would the government be required to provide a form of subsidy (either directly on the price of the user charge or on the basis of assumed guaranteed usage levels)? Can such a subsidy be afforded? |           |
| What is the level of reduction to the government's contingent liabilities by transferring this risk to the private sector? This is expected to mitigate the impact of any cost increases from the previous question.  |           |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

#### 4.3.2.2.4 Step 2: Assessing Bankability and Commercial Feasibility

After updating the CBA, VfM, and affordability analyses, two scenarios emerge:

1. Some technical solutions, including adaptation measures, can fit within a PPP structure with necessary adjustments.
2. PPP suitability or affordability is compromised by incorporating these technical solutions and risks, leading to their rejection.

In the latter case, if alternative solutions fail to manage, share, or insure against risks adequately, the project must undergo reassessment, potentially necessitating a different procurement method. Subsequent sections address considerations for

integrating climate actions and risk into PPP procurement to ensure commercial feasibility and bankability. Primary stakeholders' concerns are outlined, considering various risk levels and the extent to which technical solutions can address them, with proposed options to accommodate extra costs and risks within PPP contracts.

The following checklist outlines the initial questions the Technical Committee should address to safeguard commercial feasibility and bankability. These statements must be validated by the Entity Responsible for PPP and/or the MF.

Table 18: Safeguarding Commercial Feasibility and Bankability Checklist

| Questions  | Response |
|--|----------|
| Does the level of risk and cost associated with a technical solution impact the appetite of the investors to bid for a project, and how does this change depend on the type of PPP structure?  |          |
| If high risk diminishes interest in the project, what countermeasures can be considered to mitigate such risk (incentives, unlocking financing pools, credit support by multilateral development banks, etc.), other than asking the contracting authority to assume all risks and provide government support? |          |
| At what level of risk do such measures become relevant?  |          |
| Does a high level of risk require upfront addressing early in the concession? Can medium risk be treated with more gradual adjustments?  |          |
| To what extent do the lenders consider this, and what would they expect in terms of commercial structure and protection mechanisms to preserve the project's bankability?  |          |
| Do mitigation costs deem the project not viable from a returns perspective?  |          |
| What countermeasures can be put in place in terms of commercial structure to reduce the adverse impact of such increased costs?  |          |
| Can such costs be funded by separate pools of funds (green bonds, climate financing, multilateral cover)?  |          |
| Can the developers or investors claim other benefits from assuming such cost within the project company (e.g., carbon credits)?  |          |
| To what extent is the "climate adaptation" attribute of a project officially accepted by international organizations?  |          |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

### 4.3.3 REVIEW PROCESS

At the end of the feasibility study phase, the Technical Committee must produce a report that provides a recommendation on the feasibility of contracting the project under a PPP model. This report will consist of the following items:

- Complete content of the feasibility study, covering technical, financial, economic, legal, environmental, and other aspects of the project, with integration of climate change considerations;
- Document that consolidates lessons learned throughout the feasibility study phase, and recommendations on the project.

Following the preparation of the Technical Committee's report, the project will be reviewed by the Entity Responsible for PPP. The Entity Responsible for PPP is responsible for issuing opinions

on the feasibility studies of all PPP projects, and may request enhancements to the feasibility study, if required.

In some circumstances, the Entity Responsible for PPP and the Technical Committee may jointly determine that a project is non-viable, and will notify the respective public entity. This decision will be conveyed to the MF and the CM and the project will be removed from the Annual PPP Plan in the next update and archived.

The Entity Responsible for PPP is then responsible for using the information within the feasibility study to complete the feasibility study checklist and the feasibility study phase comparative assessment below.

Table 19: Feasibility Study Phase Review Checklist

| Criterion  | Definition   | Question to check if the project meets the criteria  |                      |
|--|--|--|----------------------|
| <b>Project is Viable</b>                             |  |  |                      |
| <b>Effective in meeting government objectives</b>    | The project is an effective method of meeting government objectives, and is consistent with the sector's strategy and relevant development plans.  | Is the project identified in a sector plan? (please attach)  | Yes/No               |
|  |  | Is the asset or service one that the Government has a continuing interest in ensuring is provided, but does not necessarily need to provide itself?                    | Yes/No               |
|  |  | If neither of the above, please attach an explanation of how the project will otherwise meet sector objectives.  | Not applicable (n/a) |
| <b>Technically feasible</b>                          | The project can be implemented technically, as planned, using known and proven technologies and engineering methods.   | Does a prefeasibility study indicate technical feasibility? (please attach)  | Yes/No               |
|  |  | If not, please attach an explanation of why you believe the project is technically feasible  | n/a                  |
| <b>Legally feasible</b>                              | All aspects of the project are permitted by law, the parties involved in the project are legally empowered and the agreements that will be required can be made legally binding on all parties concerned.  | Has a legal analysis been conducted that indicates feasibility? (please attach)  | Yes/No               |
|  |  | If not, attach an explanation of how the proposed project and PPP structure align with sector and other applicable laws.   |                      |
| <b>Environmentally compliant</b>                     | The environmental impacts of the project are in compliance with environmental laws and regulations, or can gain the necessary permits, etc. to become compliant.   | Has an initial environmental impact assessment been conducted that indicates likely environmental compliance? (please attach)  | Yes/No               |
|  |  | If not, please provide a list of the project's potential environmental impacts and indicate why you expect it to be environmentally compliant                          | n/a                  |
| <b>Socially sustainable</b>                          | All substantial social impacts of the project (as defined for consideration as a PPP) have been assessed, including providing individuals and groups impacted ample opportunity to provide feedback and voice concerns, mitigation solutions have been incorporated into the PPP contract as appropriate, and the likelihood of any one group blocking or undermining the project successfully is low. | Has a social impact assessment been conducted that has identified affected parties, and indicates social sustainability of the project? (please attach)                | Yes/No               |
|  |  | If not, attach a list of potential social impacts, including the parties that would be affected, and describe why you think the project would be socially sustainable. |                      |
|  |  | Please include an explanation of how the potential social impacts could be managed and what public consultation strategies are planned.                                |                      |
|  |  | Please attach an explanation on any site-specific issues (such as land claims, squatters, etc.), and mitigation strategies.  |                      |
| <b>Economically viable</b>                           | An economic analysis of the project shows the expected economic benefits exceed the expected economic costs, and that the project is the least cost way of achieving the benefits that is practical and feasible.  | Has an economic analysis of the project been conducted that indicates the project is economically viable? (please attach)  | Yes/No               |
|  |  | If not, attach a list of expected economic benefits and costs, and explanation of why the project is likely to be cost-benefit justified and least cost.               |                      |
| <b>Climate Resilient</b>                             | A climate risk assessment has been conducted and shows that the project either has low climate risks, or if it has medium to high climate risks, appropriate mitigation measures have been proposed.   | Has a climate risk assessment been conducted? (Please attach)  | Yes/No               |
| <b>PPP represents a genuine business opportunity</b> |  |  |                      |
| <b>PPP is a viable "commercial project"</b>          | The PPP's revenues cover costs and provide a rate of return that is sufficient for the private sector to consider the project commercially viable.   | Do the revenues of the proposed PPP cover its costs and provide a sufficient rate of return? (Please attach revenue and cost estimate)                                 | Yes/No               |
|  |  | If not, please explain why you think the project would be commercially viable.   |                      |
| <b>Market has sufficient capacity and appetite</b>   | There is sufficient market interest to attract and generate competitive tension amongst private parties that have the capacity and resources to deliver the project.   | Has an initial market sounding been conducted that indicates private sector interest?  | Yes/No               |
|  |  | If not, please explain why you think there would be sufficient private sector interest?  |                      |

Table 20: Phase 4 Feasibility Study Phase Comparative Assessment

< To be completed and updated at the end of the pre-feasibility phase, the feasibility study phase, prior to the launch of the tender, and prior to signing of the PPP contract >

| PROJECT NAME:                                     |   |  |   |  |   |
|---|---|--|---|--|---|
| Criterion   | Definition  | Project Cycle Phase  |   |  |   |
|   |   | Pre-Feasibility Study  | Feasibility Study   | Prior to the Launch of the Tender  | Prior to Contract Signing   |
| <b>Project is Viable</b>                          |   |  |   |  |   |
| <b>Effective in meeting government objectives</b> | The project is an effective method of meeting government objectives, and is consistent with the sector's strategy and relevant development plans  | <i>The project, as proposed for consideration as a PPP, is consistent with the sector's overall strategy, relevant development plans and integrates (as appropriate) with existing and planned assets and services</i> | <i>Unchanged</i>  | <i>Unchanged</i>   | <i>Unchanged</i>  |
| <b>Technically feasible</b>                       | The project can be implemented technically, as planned, using known and proven technologies and engineering methods   | <i>There is a reasonable expectation that the project is technically feasible, based on expert judgment or prefeasibility studies, which have considered the risks associated with climate change</i>                  | <i>A feasibility study, which has considered the risks associated with climate change, indicates that the project (as defined for consideration as a PPP) is technically feasible</i>   | <i>The project defined in the tender specifications is materially the same as that assessed by the feasibility study</i>   | <i>The project defined in the final PPP contract is materially the same as that assessed by the feasibility study</i>   |
| <b>Legally feasible</b>                           | All aspects of the project are permitted by law, the parties involved in the project are legally empowered to do what they will need to do under the project, and the agreements that will be required can be made legally binding on all parties concerned | <i>There is a reasonable expectation that the project is legally feasible, based on expert judgment or preliminary legal analysis</i>  | <i>A thorough legal due diligence of the feasibility study (as defined for consideration as a PPP) has assessed all legal issues having a bearing on the project, including reviewing all applicable laws and regulations, use rights, and (as appropriate) legalities of the project site, and indicates the project is legally feasible</i> | <i>The project defined in the tender specifications is materially the same as that assessed by the legal due diligence undertaken during the feasibility study</i> | <i>The project defined in the final PPP contract is materially the same as that assessed by the legal due diligence undertaken during the feasibility study</i> |



|   |   |   |   |   |  |
|---|---|---|---|---|--|
| <p><b>Environmentally compliant</b></p> | <p>The environmental impacts of the project are in compliance with environmental laws and regulations, or can gain the necessary permits, etc. to become compliant</p>  | <p><i>There is a reasonable expectation that the project is environmentally sustainable, not only under current climate conditions but also considering future climate conditions, based on expert opinion or initial environmental impact assessment</i></p>                         | <p><i>Environmental impact assessment(s) indicates that the project (as defined for consideration as a PPP) is, or is highly likely to be, in compliance with environmental laws</i></p>  | <p><i>The project defined in the tender specifications is materially the same as that considered in the environmental impact assessment undertaken during the feasibility study</i></p> | <p><i>The project defined in the final PPP contract is materially the same as that considered in the environmental impact assessment undertaken during the feasibility study</i></p> |
| <p><b>Socially sustainable</b></p>      | <p>All substantial social impacts of the project (as defined for consideration as a PPP) have been assessed, including providing impacted individuals and groups ample opportunity to provide feedback and voice concerns, and mitigation solutions have been incorporated into the PPP contract as appropriate</p> | <p><i>There is a reasonable expectation that the project is socially sustainable, not only under current climate conditions, but also considering future climate conditions</i></p>   | <p><i>A social impact assessment and public consultation indicate the project (as defined for consideration as a PPP) is socially sustainable</i></p>   | <p><i>The project defined in the tender specifications is materially the same as that considered in the social impact assessment undertaken during the feasibility study</i></p>        | <p><i>The project defined in the final PPP contract is materially the same as that considered in the social impact assessment undertaken during the feasibility study</i></p>        |
| <p><b>Economically viable</b></p>       | <p>An economic analysis of the project shows the expected economic benefits exceed the expected economic costs, and that the project is the least cost way of achieving the benefits that is practical and feasible.</p>  | <p><i>There is a reasonable expectation that the project is economically viable, based on expert judgment or an economic prefeasibility study, which analyzed costs and benefits of project in the context of current climate conditions as well as future climate conditions</i></p> | <p><i>An economic analysis of the project (as defined for consideration as a PPP) indicates the project is economically viable, which analyzed costs and benefits of project in the context of current climate conditions as well as future climate conditions</i></p>        | <p><i>The project defined in the tender specifications is materially the same as that considered in the economic analysis undertaken during the feasibility study</i></p>               | <p><i>The project defined in the final PPP contract is materially the same as that considered in the economic analysis undertaken during the feasibility study</i></p>               |
| <p><b>Climate Resilient</b></p>         | <p>A climate risk assessment has been conducted and shows that the project either has low climate risks, or if it has medium to high climate risks, appropriate mitigation measures have been proposed</p>  | <p><i>Based on a screening level climate risk assessment, the project has been shown to be either low climate risk, or in the case of medium to high-risk mitigation measures and additional climate analysis proposed</i></p>  | <p><i>Either project was deemed low climate risk in screening level assessment, or a full climate risk assessment has been conducted and appropriate mitigation measures proposed which ensure that project can withstand any climate risks to which it is vulnerable</i></p> | <p><i>The climate risk profile of the project has not materially changed since the feasibility study</i></p>  | <p><i>The climate risk profile of the project has not materially changed since the feasibility study</i></p>   |

At the conclusion of the Entity Responsible for PPP's review of the feasibility study, and following preparation of the feasibility study review checklist and the feasibility study phase comparative assessment, the Entity Responsible for PPP will submit all documentation to the MF and provide technical recommendations.

The review by the MF will focus on fiscal commitments incurred by the public entity implicit in the project. Following review by the MF, the project will be submitted to the CM for final deliberation. If the CM approves the project, it will authorize the project to proceed to the public procurement procedure under the tender and award stage.

If the CM rejects the project, it can either request further enhancements to the feasibility study or may reject the project entirely and remove it from the Annual PPP Plan. Any enhancements to the feasibility study are the responsibility of the MF, with support from the Entity Responsible for PPP, the Technical Committee, and the public entity and or SM.



# 05

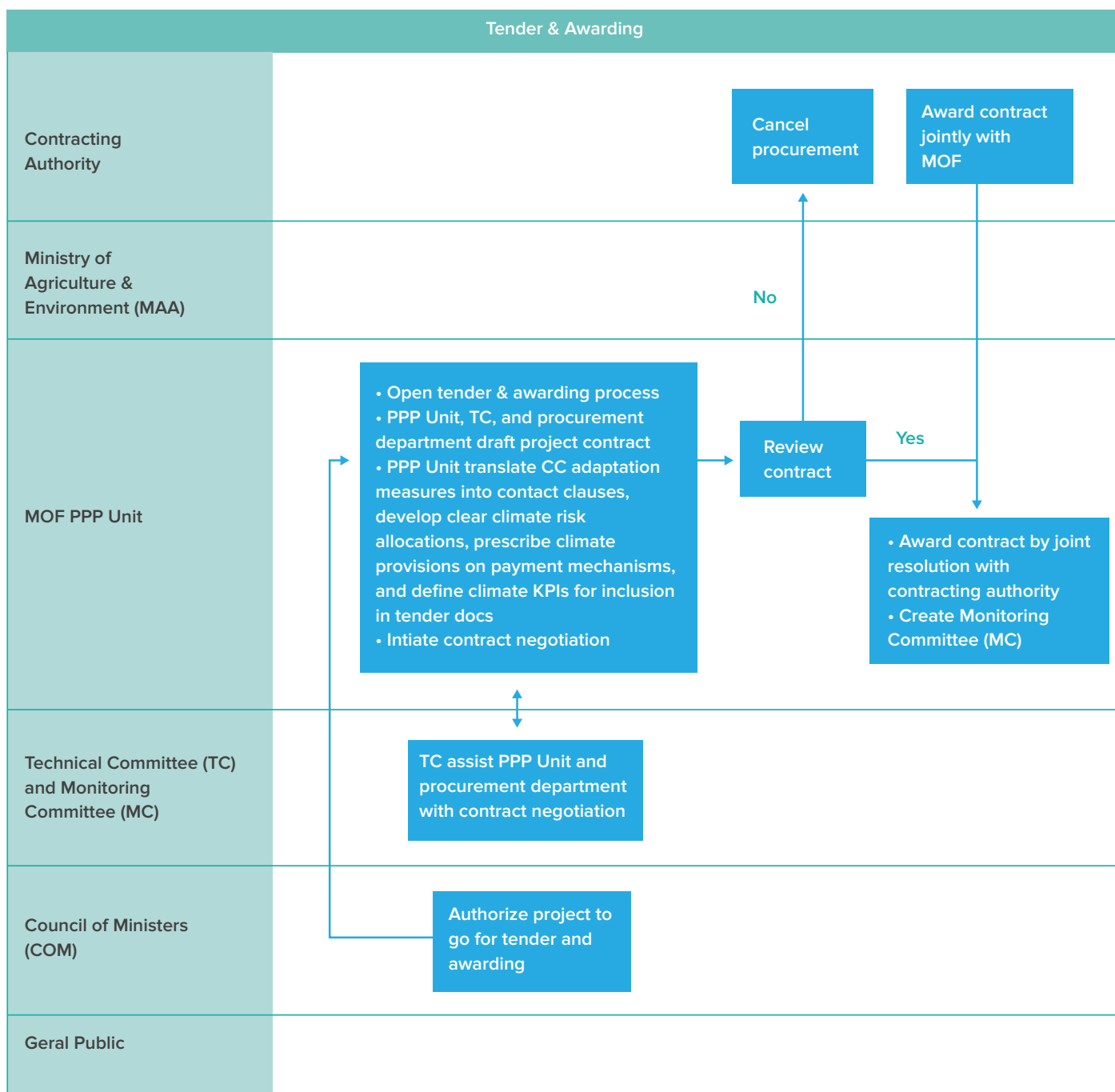
## 5 PPP PROJECT CYCLE STAGE 3: **TENDER AND AWARD**

5.1 Phase 5: Public Procurement Procedure



# 5 PPP PROJECT CYCLE STAGE 3: TENDER AND AWARD

Figure 6: Tender and Award Stage Flowchart



## 5.1 PHASE 5: PUBLIC PROCUREMENT PROCEDURE

The fifth phase in the PPP project cycle is the public procurement procedure, as part of the tender and award stage. Once the CM approves the feasibility study, the public procurement procedure involves three steps. The first step is project structuring by the development of the project’s climate-informed risk allocation, financial structure, and project design by the Technical Committee. The second step is the preparation of the Tendering Program (RFQ), Specifications Program (RFP), and draft PPP contract, including climate-smart evaluation criteria. Once these steps are complete, the MF and the public entity/contracting authority issue a Joint Ministerial Order to authorize the third step, which is the launch of the tender. The tender process is then managed by the Jury. This chapter is split into three sections to explain these steps.

### 5.1.1 CLIMATE-INFORMED PROJECT STRUCTURING

At this stage, the Technical Committee has successfully completed a comprehensive feasibility study including detailed technical due diligence. The project’s risk profile considering various climate scenarios has been assessed. The next step is to finalize the risk allocation, financial structure, and project design:

**Module 1**

**Climate Considerations for Risk Allocation** provides an overview of the climate risk typologies (from a contractual perspective), outlines how climate change impacts the risk allocation mechanism, and proposes measures, procedures, and instruments for enhanced climate risk management and climate mitigation.

**STEP 1**

Climate risk allocation

**STEP 2**

Identification of climate risk insurance coverage

*(continues in the next column)*

**Module 2**

**Climate Considerations for the Financial Structure** discusses the implications of climate change on the payment mechanism of PPPs and proposes measures/instruments to be included in the financial model. While not covered in this PPP Manual, at this stage, the Technical Committee can also explore innovative green financing tools such as green bonds, carbon credits, grants, and loans from Multilateral Development Banks (MDBs).

---

**Module 3**

**Integration of Climate Requirements into the Project Structure** outlines climate-related options to facilitate the preparation of the project documents and describes a set of requirements (climate-related KPIs, design standards) to be embedded in the RFQ and RFP to ensure that the project will deliver its climate objectives.

**STEP 1**

Climate requirements in technical design

**STEP 2**

Climate requirements in output indicators

**STEP 3**

Climate requirements in operational procedures

The Technical Committee is responsible for these tasks, with support from the Entity Responsible for PPP.

### 5.1.1.1 Module 1: Climate Considerations for Risk Allocation

The draft PPP contract outlines the obligations and rights of all parties and key provisions typically include defining the contract scope, private partner responsibilities, financial structure, oversight mechanisms, risk allocation, and dispute resolution procedures. Climate change considerations impact various contractual elements, and this step will summarize key provisions relevant to climate-smart projects<sup>12</sup>.

The underlying principle of risk allocation in a PPP contract requires that risks are allocated to the party that is best placed to manage them. Climate change introduces potential new types of risks, identified and quantified during the climate-informed feasibility study, that need to be incorporated into a climate-smart PPP contract. These include:

- **Design and Construction Phase** including risk classes relevant to site selection, environmental, design, work delays, construction standards, and social environment;
- **Operation and Maintenance Phase** including risk classes relevant to revenue risk in user-pays PPPs, climate risks in availability-based PPPs, maintenance costs and standards, financing adaptive planning, changes in legal frameworks.

#### 5.1.1.1.1 Step 1. Structure and Allocate Climate Risks

The private partner is responsible for designing and implementing the infrastructure assets and services to be provided under the contract. As such, they are typically best able to manage climate-related risks. Inadequate risk allocation can threaten project viability and may result in unaccounted contingent liabilities. To protect all parties, climate risk allocation must be clearly defined and contractually agreed within the project documents. The risk structure is further refined as the Technical Committee proceeds

with specific risk allocation decisions through the identification of the form and extent to which each party assumes the identified risks; how compensation and relief events will be treated; and the development of relevant support measures for the private/public partner.

Based on the risks identified, the following climate-informed risk allocation matrix (Table 21) should be prepared to inform the development of the risk allocation in the PPP contract, addressing risks at design and construction, as well as during the operation and maintenance phase.

In addition, the Technical Committee is encouraged to refer to **Annex 2 and Annex 3 for a comprehensive risk allocation matrix that offers a series of climate risks related to design and construction as well as operation and maintenance risk types**. The checklists in the annexes also provide several cases with examples for possible risk distribution among the public and private party. Adjustments will be necessary based on the project's specific characteristics, such as its nature, size, and location. Climate risk assessments and allocations are best tailored to individual projects, considering their unique needs and exposure levels rather than relying solely on the type of PPP structure.

Table 21: Climate-Informed Risk Allocation Matrix

| Climate Risks Related to the Design and Construction Phase  | Indicative Risk Allocation Public / Shared / Private | Indicative Relevant Risk Items and Rationale   | Risk Mitigation Measures |
|---|--|--|--------------------------|
| <b>Site Selection</b>   |  | E.g.: The <b>risk that the land is not suitable</b> is typically shared as the contracting authority may be able to secure the availability of the corridor. Still, the suitability of the corridor may be dependent on the private party's design and construction plan.  |                          |
| <b>Design Risk</b><br>The risk that the project design is not contributing towards the proposed adaptation measures are not adequately addressing climate change impacts. |  | Typically, the private party will be primarily responsible for the technical design's adequacy and <b>compliance with the standards/output specifications</b> that the contracting authority has set.<br><br>In circumstances where the contracting authority provides the basic design, the private party bidders will be only responsible for non-compliance issues unless proven that the revised design offers added value to the project compared to the basic design (i.e., increases robustness and resilience at a reasonable incremental cost). |                          |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

<sup>12</sup> More general best practice guidance on the drafting of PPP contractual provisions can be found in World Bank Group, Guidance on PPP Contractual Provisions, 2019, [https://ppp.worldbank.org/public-private-partnership/sites/ppp.worldbank.org/files/2021-03/Guidance%20on%20PPP%20Contractual%20Provisions\\_2019%20edition.pdf](https://ppp.worldbank.org/public-private-partnership/sites/ppp.worldbank.org/files/2021-03/Guidance%20on%20PPP%20Contractual%20Provisions_2019%20edition.pdf).

| Climate Risks during the Operation and Maintenance Phase  | Indicative Risk Allocation Public / Shared / Private | Indicative Relevant Risk Items and Rationale   | Risk Mitigation Measures |
|---|--|--|--------------------------|
| <p><b>Revenue Risk in User-pays PPPs</b><br/>The risk of reduced revenues caused by more frequent climate events that obscure ridership and/or availability of service (e.g., reduced aircraft arrival/ departure flow rates in airports due to prolonged periods of fog, decreased energy production due to climate-related supply changes).</p> |  | <p><b>Case 1. Internal climate risks (excluding cases of extreme events)</b> Given that the project has been adequately designed and appraised against those risks (i.e., the necessary adaptation works have been constructed), the risk of revenue loss should be low and primarily borne by the private party.</p> <p><b>Case 2. Internal climate risks caused by extreme but predictable events</b> (exceeding the design limits of adaptation works)<br/>This is the case of rare but high-impact climate events (e.g., storm, torrential rain, flood, high tide, lightning strike, a landslide caused by extreme or prolonged rainfall periods, etc.) that cause significant physical damage and prolonged disruptions to the project. The predictability of the event is a crucial differentiator in terms of risk allocation; events for which historic experience exists are usually considered insurable, and hence such risk is assumed by the private party (at the cost of an insurance premium).</p> <p><b>Case 3. Internal climate risks caused by extreme and unpredictable events</b> (overly exceeding the design limits of adaptation works)<br/>It is essential to understand that what classifies as an unpredictable event—beyond any insurable extremes—is a matter of negotiation between the public and the private party based on the experience of past disasters. Unforeseen events are typically treated under the provisions of force majeure. It is also not uncommon to prescribe a benchmark intensity level above which the climate event is considered force majeure. Depending on the PPP law of the country of origin, different risk allocation practices may be applicable for force majeure.</p> <p><b>Case 4. External climate risks.</b> Depending on the severity of the event and the level of revenue loss, there might be an established threshold/cap above which the contracting authority will bear/share the risk, and the private partner will be entitled to compensation.</p> |                          |
| <p><b>Climate Risk in Government-pays PPPs</b><br/>The risk of events affecting pre-determined performance and quality standards.</p>   |  | <p><b>Case 1. Internal climate risks</b> (excluding cases of outstanding climate risk). The private partner bears the risk of meeting the performance specifications under the contract (i.e., by ensuring that the works and the operational performance are of the necessary quality and level).</p> <p><b>Case 2. Internal climate risks caused by extreme but predictable events.</b> As in the respective B1 case above, the private party should obtain commercial insurance against such risks. If the cost of insurance is high, it may be covered through availability payment increases.</p> <p><b>Case 3. Internal climate risks caused by extreme and unpredictable events.</b> As in the respective B1 case, these cases are typically covered under force majeure provisions, which means that the public sector primarily assumes the risk.</p> <p><b>Case 4. External climate risks.</b> They refer to cases where a climate event has disrupted the availability of a significant resource/utility, thus ultimately impacting the availability of the project itself. The private party bears the principal risk and responsibility of ensuring an uninterrupted supply of resources and providing redundancies when necessary. However, depending on the event's severity, there may be instances where the risk needs to be shared among parties.</p>   |                          |
| <p><b>Maintenance Cost and Standards</b><br/>The risk of increased maintenance costs (beyond modeled costs), potentially exacerbated by climate-change effects; the risk of non-compliance with the maintenance standards.</p>  |  | <p>A entidade privada suportará o principal risco de cumprimento das normas de manutenção apropriadas, tal como estabelecido nas especificações de desempenho. O sistema continua a ser sólido e está a ser entregue na condição prevista. A entidade privada deve também assumir o custo de uma maior manutenção (pressupondo que os impactos de uma maior manutenção devido às alterações climáticas já devem estar incluídos no preço do concorrente).</p>  |                          |
| <p><b>Force Majeure Events</b><br/>Depending on the degree of exposure and vulnerability of the project site and assets, climate risk identification and allocation may require a new definition of Force Majeure and the design of refined thresholds for triggering a Force Majeure event in contractual terms.</p>                             |  | <p>A base comum em todos os casos é que os casos de força maior são normalmente tratados como um risco partilhado em que nenhuma das partes está em melhor posição do que a outra para gerir o risco ou as suas consequências. A definição final de força maior não deve ser confirmada até que as entidades públicas e privadas cheguem a acordo. À medida que as alterações climáticas se tornam a norma e a gravidade dos fenómenos climáticos aumenta, é do interesse de todas as partes tentar e limitar os casos que podem ser caracterizados como força maior e, ao invés, envidar esforços para considerar esses riscos através de vias alternativas (por exemplo, recorrendo a seguros ou a outros instrumentos financeiros).</p>   |                          |

### 5.1.1.2 Step 2: Climate Considerations for Insurance Coverage

The availability of adequate insurance coverage that enables the private sector to assume climate risks while meeting bankability and investor criteria is critical to the implementation of climate-smart PPPs. Financial institutions need assurance on debt repayment in case of disruptive events, including climate events, and the government needs assurance that it will not be left to meet those debt repayments.

Mandating adequate insurance coverage can therefore reduce contingent liabilities and realized losses arising out of, inter alia, climate events, in three ways. First, enhanced insurance policy requirements reduce the financial risk to the government by transferring these risks to the specialized risk carriers, i.e., the private (re)insurance sector. Second, these requirements will reduce the counterparty credit risk to the government by ensuring that only highly rated firms participate in the insurance arrangements. Finally, they reduce the underwriting risk by

providing and clarifying the information necessary for a fair underwriting exercise.

The table below offers guidance on factors that may impact availability of insurance coverage against climate change-induced risks, given their inherent uncertainties. The objective is to enable the private partner to obtain insurance coverage that ensures that all risks, to the extent possible, are manageable, preserving the project's bankability and investment attractiveness. An insurance coverage checklist is provided in Table 22.

Table 22: Insurance Coverage Checklist

| Insurance and Risk Transfer Mechanism   | Has this option been assessed? Yes/No | Is the option viable? Yes/No | Provide details |
|---|---------------------------------------|------------------------------|-----------------|
| <b>Catastrophe Risk Insurance</b><br>Refers to the process of transferring the risk of potential loss due to a catastrophic event from the project company to the insurer for the cost of an annual fee.  |                                       |                              |                 |
| <b>Index-based Products</b><br>An index-based weather derivative is a financial instrument used by companies or other entities to hedge against the risk of weather-related losses. This financial instrument is typically based on a weather-related index that is designed to reflect losses due to adverse climatic events such as excessive or insufficient rainfall, extreme temperature, tropical storms, and hurricanes. |                                       |                              |                 |
| <b>Catastrophe Drawdown Options</b><br>Catastrophic events require immediate liquidity to cover expenses for relief processes, recovery operations, and reconstruction works and may pose significant financial shocks to countries.  |                                       |                              |                 |
| <b>State Guarantees</b><br>May be provided not only as part of the regular bankability considerations but also to enhance the insurability of the project or the investability in the country's catastrophe risk through the issuance of catastrophe bonds.   |                                       |                              |                 |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

### 5.1.1.2 Module 2: Climate Considerations for Financial Structuring

As insurers and financiers increasingly recognize the impact of climate change, neglecting climate risks in project planning could jeopardize the bankability of projects in Cabo Verde. Ignoring climate considerations is not a viable option, particularly in the context of PPPs. It is crucial to integrate climate resilience measures into the financial modeling of PPPs to ensure their long-term viability in Cabo Verde.

In the financial structuring phase, specific attention must be

given to climate-related aspects. This involves finalizing payment or revenue mechanisms while considering the unique climate challenges faced by Cabo Verde. Determining the level of public compensation or support instruments, such as direct financial aid or credit enhancement mechanisms, is essential. This section outlines options for integrating climate provisions into the payment mechanism of PPP projects tailored to Cabo Verde's context and provides a checklist in Table 23.



Once climate adaptation plans are established, the payment mechanism should be designed to incentivize the private partner to ensure management of climate risks throughout the contract duration. Elements in the payment mechanism that can be designed around climate considerations are laid out below.

Table 23: Climate Considerations for the Payment Mechanism Checklist

| Elements in Payment Mechanism   | Has this element been assessed?<br>Yes/No | Is it viable for the project?<br>Yes/No | Provide details |
|---|---|---|-----------------|
| <b>Penalties</b> – Proper maintenance of adaptation works is critical and should be linked with the payment mechanism. To this end, penalties should be in place in case of insufficient maintenance or negligence to enforce the proper application of the relevant technical design and maximize the environmental benefit. Special care is recommended when projects involve specific classes of Nature-based solutions (e.g., mangroves) whose performance depends significantly on diligent maintenance. |   |   |                 |
| <b>Incentives</b> could be included in the payment mechanism to incentivize the private sector to assume climate risks. For example, incentives could include a shadow toll-based payment for traffic that would have otherwise been lost due to an adverse event if not for the protective measures in place (i.e., via a temporary tax break, netting it out of any revenue sharing in place, or by reducing any annual lease payment due to the public authority).   |   |   |                 |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

### 5.1.1.3 Module 3: Integration of Climate Requirements into the Project Design

Incorporating climate requirements into the project design requires the design of climate-related criteria and KPIs, ensuring that the project effectively achieves its climate objectives.

- Step 1 provides an overview of climate considerations included in relevant standards, codes, and guidance documents and discusses available rating systems and frameworks to evaluate the sustainability and resilience of infrastructure projects.
- Step 2 outlines operational procedures and standards that are essential for combating the effect of climate change during the construction and operation of the infrastructure.
- Step 3 describes how public authorities can leverage output specifications to incentivize adaptation innovations during the project's lifecycle.

#### 5.1.1.3.1 Step 1: Include Climate Requirements in Project Design

Designing infrastructure to withstand the unknown climate conditions of the future is neither a simple nor a standardized procedure. The inclusion of internationally recognized building standards that ensure, for example, energy efficiency and wastewater recycling can contribute significantly to achieving climate change adaptation objectives. Table 24 provides a checklist for incorporation of the relevant standards in RFQ and RFP.

Table 24: Incorporation of Relevant Climate Standards Checklist

| Standards, Codes and Systems  | Included in RFQ and RFP Yes/No   | Provide details |
|---|--|-----------------|
| Comply with climate provisions included in national or international codes/guidelines                     | <ul style="list-style-type: none"> <li>• ISO 14080:20181;</li> <li>• International Green Construction Code - IGCC</li> </ul>   |                 |
| Ensure a minimum climate certification level as prescribed by sustainability rating tools and frameworks. | <ul style="list-style-type: none"> <li>• LEED certification (Leadership in Energy and Environmental Design) developed by the United States Green Building Council (USGBC): a rating system for green buildings (e.g., hospitals, schools, and data centers).</li> <li>• EDGE (Excellence in Design for Greater Efficiencies) developed by IFC: a green certification for buildings that demonstrate resource efficiency in energy, water, and embodied energy in materials SuRe (GIB) and Envision (ISI, 2015).</li> <li>• FAST-Infra Sustainable Infrastructure Label developed by the Climate Policy Initiative (CPI) is a globally applicable label for projects demonstrating positive sustainability performance.</li> <li>• The Resilience Rating System (WBG, 2021): a methodology for building and tracking resilience of infrastructure projects to climate change.</li> <li>• CEEQUAL (BRE): evidence-based sustainability assessment, rating, and awards scheme for civil engineering, infrastructure, landscaping, and public realm projects.</li> </ul> |                 |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

### 5.1.1.3.2 Step 2: Include Climate Requirements in Technical Specifications and KPIs

Output specifications need to be established early in the project lifecycle and should be reinforced by transparent and effectively managed reporting standards that govern supervision processes between the grantor and the investee throughout the project's duration. A reliable method for tenderers to track and bidders to

prove adherence to sustainability and climate-resilient goals is through the measurement of KPIs related to outputs (See Table 25).

Table 25: Climate-Relevant KPIs Checklist

| List of climate-relevant KPIs for inclusion in the relevant RFQ and RFP documents   | Details  | Included Yes/No |
|---|--|-----------------|
| <b>KPIs correlating hazard intensity</b> (described by specific quantitative standards) <b>with acceptable performance level</b> (i.e., availability reduction, recovery period, construction delays).                          | When specific hazard metrics are prescribed (e.g., rainfall above a certain level, etc.), it is also common to define (in consultation with the private party) where measurements will take place and whether the measurements will be managed by the public or the private party or a mutually agreed third party. It is also important to take into account the interdependencies of infrastructure assets as part of the climate impact may be indirect through interconnection with a grid, for example in a power project. The KPIs will need to distinguish direct and indirect impacts and expectations around the ability to get an asset back into operation. |                 |
| <b>KPIs for measuring energy efficiency/ conservation in projects and their associated activities</b> (typically expressed as reductions relevant to some benchmark consumption).   | This can serve as an indirect incentive for the private sector to use renewable energy sources and adopt innovative green strategies during construction and operation of otherwise energy-intensive projects (e.g., by the installation of intelligent power distribution systems, new fuel-friendly engines, etc).   |                 |
| <b>KPIs measuring emissions to water/land</b> (e.g., nutrients and organic pollutants/waste pesticides, etc.).  | Different KPI targets are foreseen for the construction and the operation period of the PPP.   |                 |
| <b>KPIs reporting obligations and inspection rights</b> (e.g., periodic updates of O&M and emergency response plans that address climate risks).  |  |                 |
| <b>KPIs for usage of resources</b> (or enhanced usage of resources) expressed in the form of a targeted reduction, which may include activities performed during both the construction and the operation of the infrastructure. | For example, usage of secondary and recycled aggregates (e.g., construction and demolition waste) should be prescribed when possible, to further reduce the impact on natural resources.   |                 |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

### 5.1.1.3.3 Step 3: Include Climate Requirements in Operational Procedures

The advantage of procuring projects through PPPs lies in enabling the contracting authority to optimize VfM by incentivizing private operators to leverage their own insights and efforts, implementing efficient and effective methods for facility construction and project operation. This same principle extends to any operational procedure that might be influenced by climate change or could impact the environment, encompassing a broad range of activities over which the private sector holds considerable control. These activities range from overarching sustainable business strategies to specific components such as identifying climate risks and impacts, implementing efficient disaster risk management and emergency responses to extreme weather events, and establishing preventive maintenance and monitoring protocols.

A contracting authority interested in integrating climate considerations into project operational procedures may set forth a minimum set of performance standards while encouraging the private sector to incorporate climate risk into their O&M plans. They may also encourage the development of innovative emergency response plans to be activated during disasters. Contracting authorities that seek to harness the capacity, expertise, and innovation of the private sector to swiftly address extreme and catastrophic events can utilize the procurement process, including RFQs and RFPs, to incentivize the creation of innovative response strategies. The following checklist should be completed by the Technical Committee:

Table 26: Climate Considerations for Operational Procedures Checklist

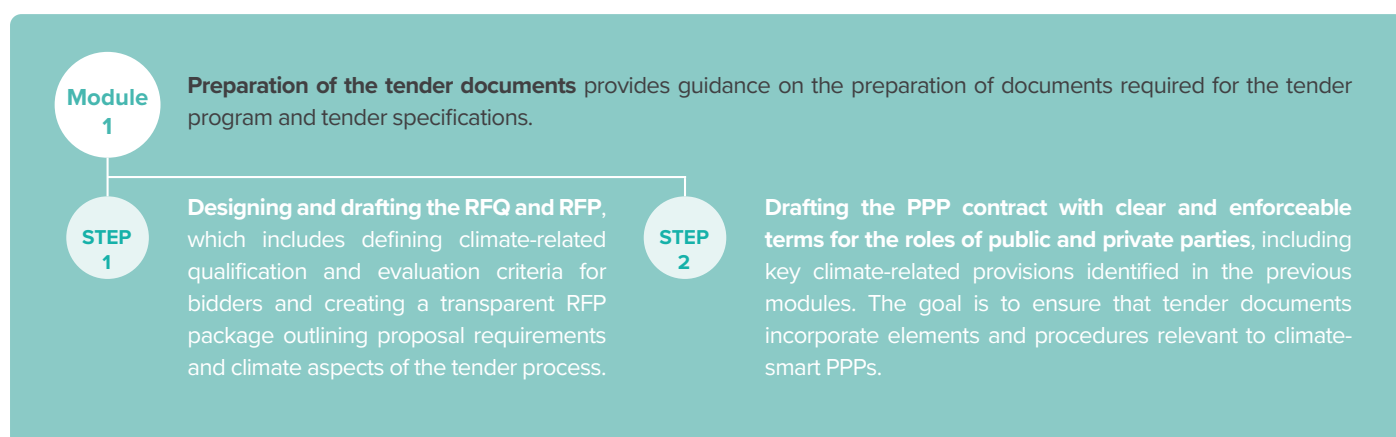
| Climate relevant area         | Key Items   |
|-------------------------------|---|
| <b>Design Requirements</b>    | <ul style="list-style-type: none"> <li>Climate provisions included in national or international guidelines</li> <li>Climate rating system such as LEED and SuRE</li> </ul>                                    |
| <b>Output Specifications</b>  | <ul style="list-style-type: none"> <li>Include hazard levels in traditional KPIs</li> <li>KPIs related to Energy Efficiency</li> <li>Reporting obligations</li> </ul>   |
| <b>Operational Procedures</b> | <ul style="list-style-type: none"> <li>International performance standards</li> <li>Emergency response plans</li> <li>O&amp;M plans that include preventative and proactive maintenance procedures</li> </ul> |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

Please refer to **Annex 4** for additional guidance regarding the development of climate related requirements in operations procedures. The annex provides information on relevant international performance standards, emergency response plans, and O&M plans.

## 5.1.2 PREPARING CLIMATE-INFORMED TENDER PROGRAM, TENDER SPECIFICATIONS, AND DRAFT PPP CONTRACT

The project's structure, developed under the previous step, can now be used to inform the preparation of the project's RFQ, RFP, and draft PPP contract.



The Technical Committee is responsible for these tasks, with support from the Entity Responsible for PPP and the MF Procurement Department. General requirements on the content of the tender program and tender specifications are provided in the Public Procurement Code.

## 5.1.2.1 Module 1: Preparation of the tender documents

### 5.1.2.1.1 Step 1. Define Climate-Smart Criteria for the RFQ/RFP

The framework for climate-smart criteria emphasizes evaluating the technical capabilities of private parties to deliver infrastructure resilient to climate change while transitioning to a decarbonization pathway. The criteria include specifications related to the following. (See Table 27)

Table 27: Climate-Smart Criteria for the RFQ/RFP Checklist

| Criteria                                 | Consideração   | Resposta |
|--|--|----------|
| <b>Design Standard</b>                   | Ensuring compliance with relevant design standards and methodologies, evaluating the quality and innovation of designs, and assessing their impact on climate resilience and environmental footprint.  |          |
| <b>Operational Standard</b>              | Assessing bidders' experience in managing climate, environmental, and social risks, including energy efficiency practices, and implementation of modern operation and maintenance procedures.  |          |
| <b>Technical/ Construction Standards</b> | Evaluating past or ongoing experience in constructing projects with similar climate-resilient and/or green characteristics, such as sustainable building practices or expertise in green building rating systems.  |          |
| <b>Project Risk Profile</b>              | Demonstrating strategies to manage prominent climate risks identified in the project structure, including construction experience in dealing with problematic site conditions, procedures for environmental risk management, and methods for designing gender-responsive projects. |          |
| <b>Output Specifications</b>             | Proposing methods and practices to achieve infrastructure performance during climate events, with assessments of realism and sufficiency. Encouragement of innovation is provided, balancing innovation with bankability.  |          |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

The Technical Committee then identifies climate-smart evaluation criteria (See Table 28) which emphasize the importance of integrating climate resilience approaches into project implementation while ensuring a balanced evaluation process that considers both price and quality factors.

Table 28: Climate-Smart Evaluation Criteria Checklist

| Criteria                              | Consideration  | Response |
|---------------------------------------|--|----------|
| <b>Balancing Price and Quality</b>    | <ul style="list-style-type: none"> <li>Has the project ensured that the least-cost approach does not compromise the quality, performance, or bidder capability of the infrastructure project?</li> <li>Has the project considered the long-term costs and benefits of resilience measures, not solely focusing on upfront costs?</li> </ul>                  | Yes/No   |
| <b>Enhanced Least Cost Evaluation</b> | <ul style="list-style-type: none"> <li>Has the project assessed potential compensation costs for events not adequately planned for, which may exceed savings from a cheaper solution?</li> </ul>   |          |
| <b>Price and Quality Evaluation</b>   | <ul style="list-style-type: none"> <li>Has the project individually assessed the financial and technical competence of proposals?</li> <li>Is the project awarding additional points to bidders offering added value in climate adaptation, while ensuring that the cost justifies the value added?</li> </ul>   |          |
| <b>Bid Evaluation Model</b>           | <ul style="list-style-type: none"> <li>Is the project using a bid evaluation model to assess technical, economic, environmental, and climate benefits?</li> </ul>  |          |
| <b>Customized Evaluation Criteria</b> | <ul style="list-style-type: none"> <li>Have the project customized evaluation criteria based on the project's nature and complexity?</li> <li>Has the project assigned higher weights to technical design categories for innovative projects?</li> <li>Is the project applying different levels of thoroughness in evaluating criteria as needed?</li> </ul> |          |
| <b>Life Cycle Evaluation</b>          | <ul style="list-style-type: none"> <li>Has the project incorporated life-cycle evaluation of proposed designs to ensure long-term environmental and economic viability?</li> <li>Has the project integrated specific sustainability metrics into the evaluation process?</li> </ul>  |          |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

### 5.1.2.1.2 Step 2. Include Climate Smart Considerations in the Draft PPP Contract

The PPP contract outlines the obligations and rights of involved parties, varying in structure and content across countries. Key provisions typically include defining the contract scope, private partner responsibilities, financial structure, oversight mechanisms, risk allocation, and dispute resolution procedures. Climate change considerations impact various contractual elements, such as risk allocation and financial structures. This step will summarize key PPP contract content relevant to climate-smart projects,

referencing insights from previous modules on climate change's implications for the financial structure and risk management.

The following table outlines high-level climate considerations for the PPP contract that the Technical Committee must assess at this stage.

Table 29: Climate Considerations for the PPP Contract Checklist

| Contents of the Contract        | Considerations  | Description of Provisions in Contract |
|---------------------------------|---|---------------------------------------|
| <b>Force Majeure Definition</b> | <ul style="list-style-type: none"> <li>Using numerical thresholds</li> <li>Guidance of climate events that qualify for compensation</li> </ul>  |                                       |
| <b>Risk Provisions</b>          | <ul style="list-style-type: none"> <li>Basic risk structure for climate-induced risks,</li> <li>Risk-sharing mechanism and instruments</li> </ul>                                     |                                       |
| <b>Financial Structure</b>      | <ul style="list-style-type: none"> <li>Payment and revenue mechanism to cover CAPEX expenditure for climate adaptation,</li> <li>Insurance requirements for climate events</li> </ul> |                                       |
| <b>Performance Requirements</b> | <ul style="list-style-type: none"> <li>KPIs for weather events, sustainable practices such as wastewater management</li> </ul>  |                                       |
| <b>Technical Requirements</b>   | <ul style="list-style-type: none"> <li>Climate Standards</li> <li>Green Certified Design</li> </ul>   |                                       |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

## 5.1.3 REVIEW PROCESS

Following the drafting of the tender documents, the Technical Committee must submit all documents to the Entity Responsible for PPP. These documents will consist of the following items:

Feasibility study from the previous phase

Summary of the project structuring

Complete suite of tender documents, including RFQ, RFP, and draft PPP contract

Document that summarizes recommendations on the project

The project will then be reviewed by the Entity Responsible for PPP. The Entity Responsible for PPP is responsible for issuing opinions on the tender documents for all PPP projects, and may request enhancements to the documents, if required.

The Entity Responsible for PPP is then responsible for using the information within the tender documents to complete the checklist and comparative assessment below.

Table 30: Tender Documentation Review Checklist

| Question   | Response |
|--|----------|
| Are technical requirements aligned with modern climate standards and green certified designs?  |          |
| Have internationally recognized rating systems or certifications been referenced for guidance?   |          |
| Have specific climate-smart design elements been incorporated into the technical requirements?   |          |
| Have performance requirements been established, including climate-smart Key Performance Indicators (KPIs)?   |          |
| Have penalties for non-compliance with climate adaptation works or insufficient maintenance been included?   |          |
| Do performance requirements consider outcomes related to climate resilience and adaptation, beyond traditional service delivery metrics?                 |          |
| Are there provisions for state guarantees to mitigate financial risks associated with climate-related damages?   |          |
| Have reserve funds been allocated to address additional climate-related capital expenditure needs during the project lifecycle?                          |          |
| Have reserve funds for additional climate Capital Expenditure (CAPEX) needs been accounted for?  |          |
| Are compensation, relief, and force majeure events resulting from extreme climate events clearly defined and outlined?                                   |          |
| Is there a robust M&E framework in place to track the effectiveness of climate adaptation measures?  |          |
| Have data collection methods and reporting requirements for climate-related indicators been defined?   |          |
| Are there provisions for regular reviews and updates of climate-related performance metrics to ensure adaptability to changing conditions?               |          |
| Have funding and financing sources for climate-smart PPPs been identified and integrated into the financial structure?                                   |          |
| Are there considerations for climate resilience in the payment mechanism, such as incentives for achieving climate-related KPIs?                         |          |
| Have mechanisms for adjusting payments based on climate-related performance been included to ensure accountability and incentivize adaptation efforts?   |          |
| Have opportunities for public-private collaboration and knowledge sharing on climate resilience been explored and integrated into the project framework? |          |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

Table 31: Tender Documentation Comparative Assessment Prior to the Public Procurement Phase

< To be completed and updated at the end of the pre-feasibility phase, the feasibility study phase, prior to the launch of the tender, and prior to signing of the PPP contract >

| PROJECT NAME:                                     |  |  |   |  |   |
|---|--|--|---|--|---|
| Criterion   | Definition   | Project Cycle Phase  |   |  |   |
|   |  | Pre-Feasibility Study  | Feasibility Study   | Prior to the Launch of the Tender  | Prior to Contract Signing   |
| <b>Project is Viable</b>                          |  |  |   |  |   |
| <b>Effective in meeting government objectives</b> | The project is an effective method of meeting government objectives, and is consistent with the sector's strategy and relevant development plans.  | <i>The project, as proposed for consideration as a PPP, is consistent with the sector's overall strategy, relevant development plans and integrates (as appropriate) with existing and planned assets and services</i>                                 | <i>Unchanged</i>  | <i>Unchanged</i>   | <i>Unchanged</i>  |
| <b>Technically feasible</b>                       | O projeto pode ser implementado do ponto de vista técnico, conforme planeado, utilizando tecnologias e métodos de engenharia conhecidos e comprovados.   | <i>There is a reasonable expectation that the project is technically feasible, based on expert judgment or prefeasibility studies, which have considered the risks associated with climate change.</i>   | <i>A feasibility study, which has considered the risks associated with climate change, indicates that the project (as defined for consideration as a PPP) is technically feasible</i>   | <i>The project defined in the tender specifications is materially the same as that assessed by the feasibility study</i>   | <i>The project defined in the final PPP contract is materially the same as that assessed by the feasibility study</i>   |
| <b>Legally feasible</b>                           | All aspects of the project are permitted by law, the parties involved in the project are legally empowered to do what they will need to do under the project, and the agreements that will be required can be made legally binding on all parties concerned. | <i>There is a reasonable expectation that the project is legally feasible, based on expert judgment or preliminary legal analysis</i>  | <i>A thorough legal due diligence of the feasibility study (as defined for consideration as a PPP) has assessed all legal issues having a bearing on the project, including reviewing all applicable laws and regulations, use rights, and (as appropriate) legalities of the project site, and indicates the project is legally feasible</i> | <i>The project defined in the tender specifications is materially the same as that assessed by the legal due diligence undertaken during the feasibility study</i>               | <i>The project defined in the final PPP contract is materially the same as that assessed by the legal due diligence undertaken during the feasibility study</i>               |
| <b>Environmentally compliant</b>                  | The environmental impacts of the project are in compliance with environmental laws and regulations, or can gain the necessary permits, etc. to become compliant.   | <i>There is a reasonable expectation that the project is environmentally sustainable, not only under current climate conditions but also considering future climate conditions, based on expert opinion or initial environmental impact assessment</i> | <i>Environmental impact assessment(s) indicates that the project (as defined for consideration as a PPP) is, or is highly likely to be, in compliance with environmental laws</i>   | <i>The project defined in the tender specifications is materially the same as that considered in the environmental impact assessment undertaken during the feasibility study</i> | <i>The project defined in the final PPP contract is materially the same as that considered in the environmental impact assessment undertaken during the feasibility study</i> |

|                                    |  |  |  |  |   |
|------------------------------------|--|--|--|--|---|
| <p><b>Socially sustainable</b></p> | <p>All substantial social impacts of the project (as defined for consideration as a PPP) have been assessed, including providing impacted individuals and groups ample opportunity to provide feedback and voice concerns, and mitigation solutions have been incorporated into the PPP contract as appropriate.</p> | <p><i>There is a reasonable expectation that the project is socially sustainable, not only under current climate conditions, but also considering future climate conditions</i></p>  | <p><i>A social impact assessment and public consultation indicate the project (as defined for consideration as a PPP) is socially sustainable</i></p>  | <p><i>The project defined in the tender specifications is materially the same as that considered in the social impact assessment undertaken during the feasibility study</i></p> | <p><i>The project defined in the final PPP contract is materially the same as that considered in the social impact assessment undertaken during the feasibility study</i></p> |
| <p><b>Economically viable</b></p>  | <p>An economic analysis of the project shows the expected economic benefits exceed the expected economic costs, and that the project is the least cost way of achieving the benefits that is practical and feasible</p>  | <p><i>There is a reasonable expectation that the project is economically viable, based on expert judgment or an economic prefeasibility study, which analyzed costs and benefits of project in the context of current climate conditions as well as future climate conditions.</i></p> | <p><i>An economic analysis of the project (as defined for consideration as a PPP) indicates the project is economically viable, which analyzed costs and benefits of project in the context of current climate conditions as well as future climate conditions.</i></p>        | <p><i>The project defined in the tender specifications is materially the same as that considered in the economic analysis undertaken during the feasibility study</i></p>        | <p><i>The project defined in the final PPP contract is materially the same as that considered in the economic analysis undertaken during the feasibility study</i></p>        |
| <p><b>Climate Resilient</b></p>    | <p>A climate risk assessment has been conducted and shows that the project either has low climate risks, or if it has medium to high climate risks, appropriate mitigation measures have been proposed.</p>  | <p><i>Based on a screening level climate risk assessment, the project has been shown to be either low climate risk, or in the case of medium to high-risk mitigation measures and additional climate analysis proposed</i></p>   | <p><i>Either project was deemed low climate risk in screening level assessment, or a full climate risk assessment has been conducted and appropriate mitigation measures proposed which ensure that project can withstand any climate risks to which it is vulnerable.</i></p> | <p><i>The climate risk profile of the project has not materially changed since the feasibility study.</i></p>  | <p><i>The climate risk profile of the project has not materially changed since the feasibility study.</i></p>   |

The Entity Responsible for PPP is responsible for submitting all tender documentation and the checklists to the MF and the line ministry of the public entity/contracting authority for review and approval by issuance of a Joint Ministerial Order. The MF and the line ministry of the public entity/contracting authority may request further enhancements to the documents, as required.

## 5.1.4 LAUNCH OF THE PUBLIC PROCUREMENT PROCEDURE

Following approval of the tender documents by Joint Ministerial Order, the public procurement procedure may be launched. There is no PPP-specific procurement process laid out in the PPP Decree-Law, and instead, PPP projects are procured according

to Law No. 88/VIII of 2015, of April 14, which approves the the Public Procurement Code. The Public Procurement Code applies to a broad range of public procurements, including PPPs. This establishes the public procurement regime and the process for the award and conclusion of each PPP contract. PPPs are procured within the National Public Procurement System, regulated by the Public Procurement Regulatory Authority in accordance with the Public Procurement Code.

The Joint Ministerial Order issued by the MF, the respective SM and MAA will also include the appointment of a Jury to provide day-to-day management of each procurement. The Jury shall be composed of three to five sitting members, one of whom shall preside, two members and two alternates. The Jury is responsible for:



- Management of the procurement process;
- Analysis and evaluation of RFQ and RFP submissions, and the preparation of required procurement reports;
- Response to any complaints presented during the procurement process.

It is recommended that the Jury includes representatives from the MF (represented by the Entity Responsible for PPP), the public entity/contracting authority, and the MAA.

## 5.1.5 REVIEW PROCESS

Following the completion of the procurement process and the preparation of procurement reports by the Jury, the Jury will select a preferred bidder and begin negotiations, supported by the Entity Responsible for PPP, to finalize the PPP contract. At the conclusion of the negotiations, the Entity Responsible for PPP will undertake a final comparative assessment to ensure that the final PPP contract is consistent with the climate-informed project design developed under previous phases (See Table 32).

Table 32: PPP Contract Comparative Assessment Prior to Signing

< To be completed and updated at the end of the pre-feasibility phase, the feasibility study phase, prior to the launch of the tender, and prior to signing of the PPP contract >

| PROJECT NAME:                                     |   |  |   |  |   |
|---|---|--|---|--|---|
| Criterion   | Definition  | Project Cycle Phase  |   |  |   |
|   |   | Pre-Feasibility Study  | Feasibility Study   | Prior to the Launch of the Tender  | Prior to Contract Signing   |
| <b>Project is Viable</b>                          |   |  |   |  |   |
| <b>Effective in meeting government objectives</b> | The project is an effective method of meeting government objectives, and is consistent with the sector's strategy and relevant development plans  | <i>The project, as proposed for consideration as a PPP, is consistent with the sector's overall strategy, relevant development plans and integrates (as appropriate) with existing and planned assets and services</i> | <i>Unchanged</i>  | <i>Unchanged</i>   | <i>Unchanged</i>  |
| <b>Technically feasible</b>                       | The project can be implemented technically, as planned, using known and proven technologies and engineering methods.  | <i>There is a reasonable expectation that the project is technically feasible, based on expert judgment or prefeasibility studies, which have considered the risks associated with climate change.</i>                 | <i>A feasibility study, which has considered the risks associated with climate change, indicates that the project (as defined for consideration as a PPP) is technically feasible</i>   | <i>The project defined in the tender specifications is materially the same as that assessed by the feasibility study</i>   | <i>The project defined in the final PPP contract is materially the same as that assessed by the feasibility study</i>   |
| <b>Legally feasible</b>                           | All aspects of the project are permitted by law, the parties involved in the project are legally empowered to do what they will need to do under the project, and the agreements that will be required can be made legally binding on all parties concerned | <i>There is a reasonable expectation that the project is legally feasible, based on expert judgment or preliminary legal analysis</i>  | <i>A thorough legal due diligence of the feasibility study (as defined for consideration as a PPP) has assessed all legal issues having a bearing on the project, including reviewing all applicable laws and regulations, use rights, and (as appropriate) legalities of the project site, and indicates the project is legally feasible</i> | <i>The project defined in the tender specifications is materially the same as that assessed by the legal due diligence undertaken during the feasibility study</i> | <i>The project defined in the final PPP contract is materially the same as that assessed by the legal due diligence undertaken during the feasibility study</i> |

|                                  |   |   |   |   |  |
|----------------------------------|---|---|---|---|--|
| <b>Environmentally compliant</b> | <p>The environmental impacts of the project are in compliance with environmental laws and regulations, or can gain the necessary permits, etc. to become compliant</p>  | <p><i>There is a reasonable expectation that the project is environmentally sustainable, not only under current climate conditions but also considering future climate conditions, based on expert opinion or initial environmental impact assessment</i></p>                         | <p><i>Environmental impact assessment(s) indicates that the project (as defined for consideration as a PPP) is, or is highly likely to be, in compliance with environmental laws</i></p>  | <p><i>The project defined in the tender specifications is materially the same as that considered in the environmental impact assessment undertaken during the feasibility study</i></p> | <p><i>The project defined in the final PPP contract is materially the same as that considered in the environmental impact assessment undertaken during the feasibility study</i></p> |
| <b>Socially sustainable</b>      | <p>All substantial social impacts of the project (as defined for consideration as a PPP) have been assessed, including providing impacted individuals and groups ample opportunity to provide feedback and voice concerns, and mitigation solutions have been incorporated into the PPP contract as appropriate</p> | <p><i>There is a reasonable expectation that the project is socially sustainable, not only under current climate conditions but also considering future climate conditions</i></p>  | <p><i>A social impact assessment and public consultation indicate the project (as defined for consideration as a PPP) is socially sustainable</i></p>   | <p><i>The project defined in the tender specifications is materially the same as that considered in the social impact assessment undertaken during the feasibility study</i></p>        | <p><i>The project defined in the final PPP contract is materially the same as that considered in the social impact assessment undertaken during the feasibility study</i></p>        |
| <b>Economically viable</b>       | <p>An economic analysis of the project shows the expected economic benefits exceed the expected economic costs, and that the project is the least cost way of achieving the benefits that is practical and feasible</p>   | <p><i>There is a reasonable expectation that the project is economically viable, based on expert judgment or an economic prefeasibility study, which analyzed costs and benefits of project in the context of current climate conditions as well as future climate conditions</i></p> | <p><i>An economic analysis of the project (as defined for consideration as a PPP) indicates the project is economically viable, which analyzed costs and benefits of project in the context of current climate conditions as well as future climate conditions</i></p>        | <p><i>The project defined in the tender specifications is materially the same as that considered in the economic analysis undertaken during the feasibility study</i></p>               | <p><i>The project defined in the final PPP contract is materially the same as that considered in the economic analysis undertaken during the feasibility study</i></p>               |
| <b>Climate Resilient</b>         | <p>A climate risk assessment has been conducted and shows that the project either has low climate risks, or if it has medium to high climate risks, appropriate mitigation measures have been proposed</p>  | <p><i>Based on a screening level climate risk assessment, the project has been shown to be either low climate risk, or in the case of medium to high-risk mitigation measures and additional climate analysis proposed</i></p>  | <p><i>Either project was deemed low climate risk in screening level assessment, or a full climate risk assessment has been conducted and appropriate mitigation measures proposed which ensure that project can withstand any climate risks to which it is vulnerable</i></p> | <p><i>The climate risk profile of the project has not materially changed since the feasibility study</i></p>  | <p><i>The climate risk profile of the project has not materially changed since the feasibility study</i></p>   |

Following preparation of the comparative assessment, the Entity Responsible for PPP will submit the procurement report, the final PPP contract, and the comparative assessment to the MF and the respective public entity/contracting authority for review.

All procurement awards are required to comply with the Budgetary Framework Law. Any public expenditure inherent within a PPP contract must be provided for in accordance with the respective budgets of the public entity/contracting authority and the schedule of budgetary resources. When awarding PPP contracts under the Public Procurement Code, the public entity/contracting authority shall, prior to contract signature, obtain approval from the MF on any guarantees to be provided by the private partner and/or the government.

Once all required approvals have been received, contract award shall be made by the MF and the respective public entity/contracting authority by a Joint Ministerial Order within thirty (30) days of receipt of the procurement report, the final PPP contract, and the comparative assessment by the Entity Responsible for PPP. The PPP contract can then be signed jointly by the MF, the respective public entity/contracting authority, and the winning bidder/selected private partner.





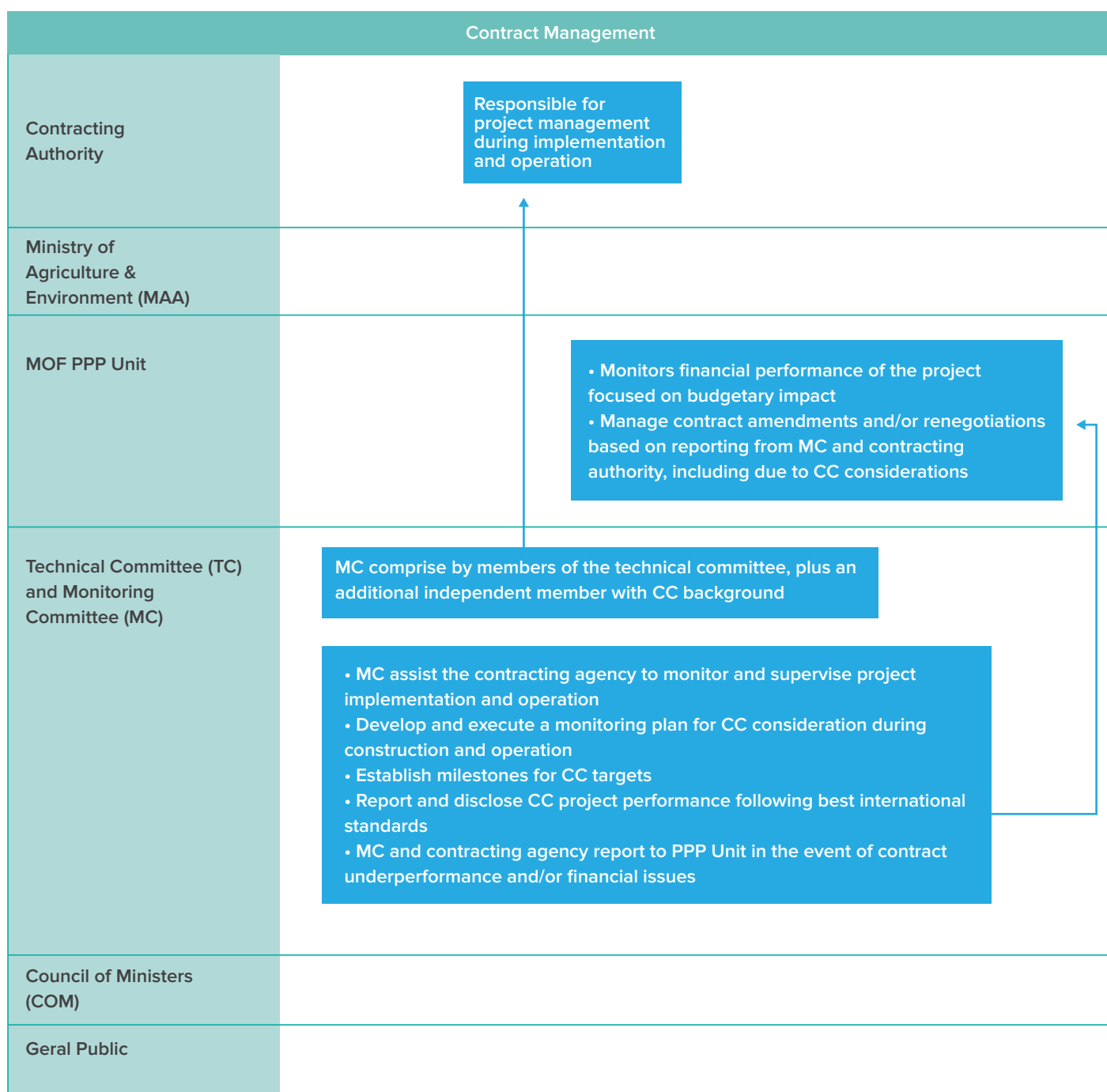
# 06

## 6 PPP PROJECT CYCLE STAGE 4: CONTRACT MANAGEMENT

6.1 Phase 6: Management, monitoring, and financing  
of the contract

# 6 PPP PROJECT CYCLE STAGE 4: CONTRACT MANAGEMENT

Figure 7: Contract Management Flowchart



## 6.1 PHASE 6: MANAGEMENT, MONITORING, AND FINANCING OF THE CONTRACT

The sixth phase in the PPP project cycle is the management, monitoring, and financing of the contract. A Monitoring Committee is established for each project. Members are appointed by the MF, the respective SM, and the MAA. The members of the Monitoring Committee may be the same members of the prior Technical Committee and shall include an additional independent member with climate change expertise. This allows the Monitoring Committee to take advantage of the institutional memory of the Technical Committee, which will be of value throughout the contract duration.

In addition, MF provides fiscal oversight of each PPP project while day-to-day contract management related to all other technical issues is the responsibility of the respective public entity/contracting authority. The PPP contract may also allow for an independent verifier to be retained to provide dedicated contract management services. This independent verifier may be engaged by the respective public entity/contracting authority, through the relevant public procurement procedure, or by the private partner if provided for in the PPP contract.

Contract management of a PPP contract should seek to ensure:

- Services are delivered continuously to the agreed upon standards;
- Contractual responsibility and risk allocation are maintained;
- Changes to the external environment which present both risks and opportunities are identified and acted upon (including those pertaining to climate);
- Efficiency expectations in contract and handback provisions in contract are met.<sup>13</sup>

### 6.1.1 CLIMATE CONSIDERATIONS IN CONTRACT MANAGEMENT

The Entity Responsible for PPP/Monitoring Committee should ensure that its contract management plan incorporates key climate considerations as summarized in the table below.

Table 33: Incorporating Climate Change into the Contract Management Plan

| Focus area   | Description   | Name relevant contractual provisions |
|--|---|--------------------------------------|
| <b>Composition of Monitoring Committee</b>                             | There is a need for the Monitoring Committee to include members with expertise in monitoring climate indicators and qualitatively assessing climate risks. The Monitoring Committee should efficiently engage external consultants when necessary.  |                                      |
| <b>Monitoring Plan for Climate-Related Construction and Operations</b> | There is a need for a well-structured plan to monitor climate-related construction and operations, incorporating adaptation measures. It is crucial to assess the suitability and capability to monitor climate-related KPIs early on to rectify any weaknesses promptly.                 |                                      |
| <b>Definition of Milestones</b>  | An effective approach may involve establishing specific milestones in collaboration with the private partner to enhance the objectivity and timeliness of the monitoring process, ensuring efficient partnership between public and private entities in combating climate change effects. |                                      |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

<sup>13</sup> The Global Infrastructure Hub's PPP Contract Management Report provides good core guidance on setting up a contract management team and key issues often faced by Procuring Agency stakeholders during the contract management phase: <https://managingppp.gihub.org/report/>

## 6.1.2 CLIMATE-RELATED REPORTING REQUIREMENTS

In 2015, the Financial Stability Board established the Task Force on Climate-related Financial Disclosures (TCFD) to improve and expand the reporting of climate-related financial information. The TCFD mandate is to develop recommendations on the types of information that companies should disclose to help investors, lenders, and insurers appropriately assess and price a specific set of risks related to climate change. Transparent reporting and adherence to standards, such as those outlined by the TCFD, are

imperative to effective monitoring that ensures compliance with established norms.

The TCFD structures its recommendations around four thematic areas that represent core elements of how organizations operate: governance, strategy, risk management, and metrics and targets (refer to table below).

Table 34: TCFD Thematic Areas

| TCFD Area                  | Description   | Recommendations  |
|----------------------------|---|--|
| <b>Governance</b>          | These recommendations focus on the disclosing of the organization's management of climate-related risks and opportunities.  | <ul style="list-style-type: none"> <li><b>I.</b> Description of the board's oversight of climate-related risks and opportunities.</li> <li><b>II.</b> Description of the role of management in assessing and managing climate-related risks and opportunities.</li> <li><b>III.</b> Disclosure of how climate-related risks and opportunities are integrated into overall risk management processes and decision-making frameworks.</li> </ul>   |
| <b>Strategy</b>            | This area discloses the actual and potential impact of climate-related risks and opportunities on an organization's business, strategy, and financial planning, where such information is material. | <ul style="list-style-type: none"> <li><b>I.</b> Description of the climate-related risks and opportunities that the organization has identified in the short, medium and long term.</li> <li><b>II.</b> Description of the impact of climate-related risks and opportunities on the organization's business, strategy, and financial planning, including any changes to business models, products, or services in response to climate change.</li> <li><b>III.</b> Description of the resilience of the organization's strategy under different climate-related scenarios, such as low-carbon transition scenarios or physical climate risks scenarios.</li> </ul>  |
| <b>Risk Management</b>     | This pillar focuses on the disclosure of how the organization identifies, assesses and manages climate-related risks.   | <ul style="list-style-type: none"> <li><b>I.</b> Description of the organization's processes for identifying and assessing climate-related risks opportunities across relevant functions, such as operations, supply chain, and investments.</li> <li><b>II.</b> Description of the organization's processes for managing climate-related risks, including scenario analysis, stress testing, and sensitivity analysis.</li> <li><b>III.</b> Description of how the processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management.</li> <li><b>IV.</b> Information on the organization's exposure to transition risks (e.g., policy and regulatory changes, market shifts, technological developments) and physical risks (e.g., extreme weather events, sea-level rise, resource scarcity).</li> </ul> |
| <b>Metrics and Targets</b> | The last pillar of the TCFD recommendations focus on the metrics and targets used to assess and manage relevant climate-related risks and opportunities, where such information is material.        | <ul style="list-style-type: none"> <li><b>I.</b> Disclosure on the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process, such as GHG emissions, energy consumption, renewable energy capacity, and climate-related financial impacts.</li> <li><b>II.</b> Targets and milestones to reduce GHG emissions, improve energy efficiency, increase renewable energy use, and enhance resilience to climate-related risks.</li> <li><b>III.</b> Information on progress towards achieving climate-related targets and objectives, including any challenges or barriers encountered.</li> </ul>   |

Source: TCFD. 2024. <sup>14</sup>

<sup>14</sup> Available at: <https://www.fsb-tcfd.org/recommendations/>

The four thematic areas are supported by key climate-related financial disclosures, referred to as recommended disclosures, that fill out the framework with information that helps investors and stakeholders understand how reporting organizations identify and assess climate-related risks and opportunities.

The Entity Responsible for PPP and the Monitoring Committee should promote collaborative and participatory processes in climate change hazard screening and management. This includes fostering ongoing communication with stakeholders throughout the project lifecycle. Further, the deployment of a screening tool that tracks changing climatic conditions that may introduce new hazards and heighten the vulnerability of infrastructure assets is recommended.

The Monitoring Committee can request maintenance history disclosure from private partners during the contract management stage to facilitate the identification of climate change risk trends and enable informed decision-making for future projects, particularly in quantifying resilience benefits. In addition, all PPP partners should be responsible for monitoring ongoing and evolving climate risks. Increased levels of communication among the PPP partners can help them manage climate-related changes and identify new and innovative resilience building measures that can be incorporated in O&M. Knowledge-sharing workshops and the communications of “lessons-learned” can assist in improving the resilience of future PPP projects and refining the contractual agreements, where applicable.

### 6.1.3 RENEGOTIATION

Changes in the contract environment are inevitable, given the long-term and complex nature of PPP contracts, including for climate-related reasons. The contract should include mechanisms to adjust to such changes. These contract mechanisms will typically include adjustment provisions, dispute resolution, and force majeure and termination provisions, including those related to resilience and climate change. The Monitoring Committee should be prepared to negotiate any issues under these mechanisms and maintain contractual balance over time, ensuring alignment with project viability and climate benefits while minimizing risks to the public.

In some cases, the Government of Cabo Verde or the private partner may decide to seek changes in the PPP contract that cannot be accommodated through the contractual adjustment mechanisms. In such cases, the contract can be renegotiated. Since there is no competitive pressure in a renegotiation, the government has to take care to maintain the project’s VfM, and a formal and well-structured approach to renegotiation should be employed. This approach is provided for within the PPP Decree-Law and applies to any changes to the PPP contract after the

selection of the private partner and/or through the duration of the PPP contract:

- When a public entity initiates the study and preparation of a potential contractual amendment, it shall notify in writing to the MF explaining the grounds for negotiation and the objectives to be achieved. The Monitoring Committee shall be oversee the amendment of the contract, and the MF will also establish a Negotiating Committee. The members of the Negotiating Committee will have appropriate expertise and qualifications and should include a member from the Entity Responsible for PPP and the MAA to provide coverage of PPP and climate change-related issues;
- When the public entity/contracting authority considers that the renegotiated contract is in a position to be agreed, it shall notify the Monitoring Committee in writing of the proposed changes to the contract, including the draft of the proposed contractual amendments.
- The MF will then issue a binding opinion on the proposed contractual amendments within thirty (30) days, after which and in case of non-issuance, the opinion shall be issued as approved.

In other cases, the public entity/contracting authority may wish to add or reduce charges within the PPP contract or otherwise restore the financial balance of the contract. Where the public entity/contracting authority intends, in accordance with the terms laid down in the contract or by law, it shall, in advance, estimate the fiscal impact of any changes over the remainder of the contract, and verify the corresponding budgetary affordability as necessary.

The public entity/contracting authority should submit proposed changes to the contractual charges to the Monitoring Committee. Following guidance from the Monitoring Committee, the public entity shall be required to issue within twenty (20) days from the date of receipt of the opinion of the Monitoring Committee, a summary of the proposed changes to any contractual charges. This could include:

- An increase in the expected charges for the public entity, unless the amount of the charge does not exceed, in annual terms or in gross cumulative terms, discounted values;
- A reduction in the burden on the private partner.



### 6.1.3.1 Climate considerations during contract renegotiations

Force majeure clauses and eventual compensations related to resilience and climate change will likely become an even more delicate field of contract management, together with how insurance covers evolve over time). As such, the need for efficient handling of renegotiations and disputes might increase due to climate change.

While it is generally advisable to minimize frequent renegotiations, the uncertainty surrounding the progression of climatic indicators and their impact on infrastructure availability throughout the project's lifespan may increase the likelihood of renegotiations. This challenge becomes more apparent when innovative mechanisms or structures (such as green financing tools, Nature-based solutions, and adaptive plans) are integrated into contracts. Since these options can significantly influence project viability, it is recommended that contract management teams be prepared to negotiate aspects like tariff impacts and maintain contractual transparency over time, despite potential uncertainty regarding the asset itself. However, any renegotiation must ensure that it does not jeopardize the project's climate benefits and the public in general.

### 6.1.4 LITIGATION

The Entity Responsible for PPP will provide technical support to the public entity/contracting authority in any judicial or arbitration proceedings relating to a PPP project. The public entity/contracting authority will, within three (3) days, inform the Entity Responsible for PPP of any judicial summons or request for submission of a dispute to arbitration.



# ANNEX 1: GLOSSARY OF TERMS

**Adaptation (to climate change):** Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.

**Adaptive Planning:** The adaptive planning approach involves outfitting projects with adequate resilience measures to withstand a moderate climate change scenario while minimizing initial expenses. Simultaneously, it incorporates additional adaptation enhancements that will be triggered by specific threshold indicators in more extreme climate change pathways.

**Affordability:** Refers to the ability of users and/or the government to afford the cost of a PPP project. For a PPP to be affordable, users must be able to pay the required user charges and/or the government must be able to meet its payment and other financial obligations within its available budget (at levels which make the project financially viable).

**Bankability:** Refers to a project's ability to attract private financing. For a PPP to be bankable, the project's expected revenues (inflows) under a reasonable scenario must be sufficient to cover all expected costs (outflows) of the private partner (including costs related to financing the project and meeting expected returns). Other risks not related to cash generation potential or the return profile of a project, such as climate and environmental and social risk, may also impact bankability.

**Climate:** The long-term average weather of a region, including typical weather patterns, the frequency and intensity of storms, cold spells, and heat waves.

**Climate adaptation measures:** Measures that facilitate adjusting to actual or expected climate changes and their impacts, in order to moderate harm or exploit beneficial opportunities.

**Climate and disaster risk:** The potential for adverse consequences where something of value is at stake and where the occurrence and degree of an outcome is uncertain. In the context of the assessment of climate impacts, the term risk is often used to refer to the potential for adverse consequences of a climate-related hazard, or of adaptation responses to such a hazard, on lives, livelihoods, health and well-being, ecosystems and species, economic, social, and cultural assets, services (including ecosystem services), and infrastructure.

**Climate change:** A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and is in addition to natural climate variability observed over comparable time periods.

**Climate change adaptation** refers to the incorporation of measures that increase the ability to absorb, withstand, and recover from shocks such as extreme weather events as well as sudden changes in demand which might be driven by climate migration patterns. Cabo Verde's National Adaptation Plan prioritizes several key sectors to address the country's vulnerability to climate change impacts.

**Climate change mitigation** refers to the reduction of GHG emissions and the development of alternative pathways towards decarbonization. As per its Nationally Determined Contribution, Cabo Verde is committed to the Paris Agreement and communicated its updated emissions reduction target of 18% below business-as-usual by 2030 (24% with international support). Cabo Verde aims to achieve a net-zero economy by 2050.

**Climate-proof design:** A design that explicitly incorporates and addresses risks that are caused by climate change.

**Climate resilience measures:** Measures that increase the ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner. This also includes the preservation, restoration, or improvement of the system's essential basic structures and functions.

**Climate risk:** The potential for consequences from climate variability and change where a project is at stake and where the outcome is uncertain. Risk is often represented as the probability of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur. However, in most climate tool kits, climate risk is defined directly from the interaction of vulnerability, exposure, and hazard – as probability cannot be explicitly computed for climate change.

**Exposure** is an index of the plausibility of the hazard actually affecting the infrastructure. It may be thought of as proximity of the project to the hazard source.

**Hazards** are the types of stressors (i.e., the natural phenomenon) that may potentially threaten infrastructure (e.g., high wind, excess floods and higher temperatures).

**Likelihood** defines the probability of the specific hazard occurring at a certain intensity.

**Mitigation:** In the context of climate change, a human intervention to reduce the sources or enhance the sinks of greenhouse gases.

Examples include using fossil fuels more efficiently for industrial processes or electricity generation, switching to solar energy or wind power, improving the insulation of buildings, and expanding forests and other ‘sinks’ to remove greater amounts of carbon dioxide from the atmosphere.

**National Adaptation Plan:** A NAP process seeks to identify medium and long-term adaptation needs, informed by the latest climate science. Once major vulnerabilities to climate change have been identified, the NAP process develops strategies to address them.

**Nationally determined contributions (NDCs):** NDCs are at the heart of the Paris Agreement and the achievement of its long-term goals. NDCs embody efforts by each country to reduce national emissions and adapt to the impacts of climate change.

**Natural disaster:** Any event or force of nature that has catastrophic consequences, such as an earthquake, a flood, forest fire, hurricane, lightning, tornado, tsunami, or volcanic eruption.

**Nature-based solution:** An umbrella term referring to actions that protect, manage, and restore natural capital in ways that address societal challenges effectively and adaptively. These include structural and nonstructural actions, ranging from ecosystem restoration to integrated resource management, green infrastructure, and more.

**Risk** is the probability of harmful consequences or expected loss (physical damage or disruption of economic activity) resulting from the interaction of a hazard with the built environment. Risk is therefore considered as the combination of the severity and associated likelihood of a hazard, the number of assets exposed to the hazard, and their vulnerability to damage.

**Representative concentration pathways:** Scenarios that include time series of emissions and concentrations of the full suite of greenhouse gases and aerosols and chemically active gases, as well as land use/land cover. “Representative” signifies that each RCP provides only one of many possible scenarios that would lead to the specific radiative forcing characteristics. “Pathway” emphasizes that not only the long-term concentration levels are of interest, but also the trajectory taken over time to reach that outcome.

**Resilience:** The capacity of social, economic, and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity, and structure - while also maintaining their capacity for adaptation, learning and transformation.

**Resilient infrastructure (also termed resilience of infrastructure):** Infrastructure that is planned, designed, built, operated, and maintained in a way that anticipates, prepares for, and adapts to changing climate conditions. It can also withstand, respond to, and recover rapidly from disruptions caused by climate conditions. For example, developing drainage systems to ensure that a road network does not experience washouts.

**Infrastructure for resilience (also termed resilience through infrastructure):** Infrastructure put in place primarily to increase the resilience of a targeted community or asset by reducing exposure and vulnerability to a climate hazard or increasing the adaptive capacity of the community or asset. For example, a coral reef restoration project to mitigate the risk of tidal/coastal flooding.

**Triple Dividend of Resilience (TDR)** is a contemporary conceptualized approach to evaluating the benefits of climate investments and action. It argues that investments in resilient infrastructure can i) generate income through avoided losses from disasters; ii) stimulate additional development through investments by households and businesses; and iii) encourage multi-purpose infrastructural design to maximize co-benefits.

**Value for Money:** Refers to an assessment of whether the project is cost-benefit justified, and whether a PPP model is the least-cost way of achieving the benefits compared to other delivery models including conventional public procurement. PPPs provide a number of potential value drivers that can contribute to value for money, including whole-of-life costing and integration of construction and operational tasks, risk transfer, focus on service delivery outcomes, innovation, and accountability.

**Vulnerability:** The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity.

# ANNEX 2: CLIMATE CHECKLIST FOR RISK ALLOCATION MATRIX – DESIGN AND CONSTRUCTION

| Climate Risks Related to the Design and Construction Phase  | Indicative Risk Allocation<br>Public / Shared / Private | Indicative Relevant Risk Items and Rationale  | Risk Mitigation Measures |
|---|---|---|--------------------------|
| <p><b>A1. Site Selection</b><br/>e.g., the risk associated with selecting land suitable for the project; risk of hidden geotechnical risks (that may be exacerbated by climate events) that were not adequately identified and assessed during due diligence studies. Climate- change induced risks, e.g., inundation of the project area, scarcity of resources required for the project's operations (e.g., inability to guarantee cleaning of solar panels due to projected water shortage).</p> |   | <p>The <b>risk that the land is not suitable</b> is typically shared as the contracting authority may be able to secure the availability of the corridor. Still, the suitability of the corridor may be dependent on the private party's design and construction plan.</p> <p>The contracting authority usually undertakes detailed geotechnical and ground/soil surveys during the feasibility stage and shares this information with the private partner during the tender process and should therefore bear the <b>risk of not providing accurate geotechnical data</b>.</p> <p>Suppose it is not possible to perform surveys before the tender. In that case, <b>the risk for unsurveyed land</b> will be allocated to the contracting authority (e.g., as a compensation event) or may be shared by the private partner (e.g., as a relief event).</p> <p>In case of projects involving significant underground works (e.g., tunnels), the private partner should assess geotechnical risks.</p> |                          |
| <p><b>A2. Environmental Risk</b><br/>e.g., risks associated with pre-existing conditions; conditions caused by the project; compliance with environmental laws.</p>   |   | <p><b>Pre-existing pollution</b> is typically the contracting authority's risk unless it was known to and priced by the private party.</p> <p>The private party typically bears the <b>risk of obtaining all environmental licenses and environmental authorizations</b> after the contract signature. (For exceptions, readers may refer to World Bank's Guidance on PPP Contractual Provisions, 2019 Edition.)</p> <p>The private party bears the <b>risk of complying with all environmental licenses</b> and environmental laws applicable to the project. Exceptions may apply in the case of "changes in law" (as described in the transition risk category).</p> <p>The private party bears the <b>risk of environmental events caused during the project construction</b>. (i.e., unrestricted GHG emissions, contamination, destruction of biodiversity, noise, etc.)</p>  |                          |
| <p><b>A3. Design Risk</b><br/>The risk that the project design is not contributing towards climate mitigation and the proposed adaptation measures are not adequately addressing climate change impacts.</p>  |   | <p>Typically, the private party will be primarily responsible for the technical design's adequacy and <b>compliance with the standards/output specifications</b> that the contracting authority has set.</p> <p>In circumstances where the contracting authority provides the basic design, the private party bidders will be only responsible for <b>non-compliance issues</b> unless proven that the revised design offers added value to the project compared to the basic design (i.e., increases robustness and resilience at a reasonable incremental cost).</p>  |                          |

|  |  |   |  |
|--|--|---|--|
| <p><b>A4. Work Delays</b><br/>(due to climate events)</p>  |  | <p>The private party typically assumes the <b>risk of delays to the extent they are not caused by force majeure or events due to grantor non-compliance or failure</b> (relief and or compensation events).</p> <p>Exceptions may also include <b>work delays caused by the unavailability of input</b> (e.g., interruptions in the supply of utilities) due to adverse climatic impacts on the broader project environment (outside of the private partner).</p>   |  |
| <p><b>A5. Construction Standards (mitigation and adaptation works)</b><br/>The risk of non-compliance with regulatory construction standards.</p>  |  | <p><b>Meeting relevant quality standards</b> will be a private party risk. Exceptions may apply in case of “changes in law/standards” after the project signature (as described in the “transition risk” category). It will however be critical for the contracting authority to include and incentivize the use of standards both in the contract and RFP/RFQ stage (e.g., including a requirement for green building certification – EDGE or LEED)</p>  |  |
| <p><b>A6. Social Risk</b><br/>The risk associated with the project impact on the affected population (including the risk of widening gender gaps).</p>   |  | <p>During the feasibility stage, it is expected that the contracting authority would have assessed the impact of the project on the broader socio- economic environment and, in particular, <b>the effects of climate change on the already vulnerable population</b> and take actions to minimize any negative impact. It is also expected that projects that widen the gender gaps would have been excluded from consideration as inappropriate.</p> <p>In that respect, the contracting authority will bear this risk except to the extent the private party is responsible for implementing any social management measures.</p> |  |
| <p><b>A7. Changes in Law</b><br/>(and overall climate transition risks)<br/>The risk of potential loss or potential impacts of the value of investments that may be triggered from changes - or new implementations - in the policy frameworks, the legislation system, or government strategies, as well as the transformation of traditional operations in primary sectors due to the effects of climate change.</p> |  | <p>Regarding climate-change policies, <b>changes in applicable legislation</b> can neither be foreseen nor managed by either party. The policy landscape is currently transitioning, adding uncertainty to any investment across all economic sectors. To effectively handle such risks without hindering the investment appetite, it may be good practice to establish risk-sharing mechanisms in the contract to absorb any transitioning impacts towards a greener economy.</p>  |  |
| <p><b>A8. Unavailability of Insurance</b></p>  |  | <p>The private party typically bears the responsibility for acquiring insurances and the cost of doing so. However, if <b>insurance becomes unavailable</b> (in the international insurance market from reputable insurers), <b>or the premiums are prohibitively high</b> (beyond the control of any party), the private party will be eligible for pricing in reasonable contingency. For a detailed description of the unavailability of insurance, refer to World Bank’s Guidance on PPP Contractual Provisions (2019 Edition).</p>   |  |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

# ANNEX 3: CLIMATE CHECKLIST FOR RISK ALLOCATION MATRIX – OPERATION AND MAINTENANCE

| Climate Risks during the Operation and Maintenance Phase  | Indicative Risk Allocation Public / Shared / Private | Indicative Relevant Risk Items and Rationale  | Risk Mitigation Measures |
|---|--|---|--------------------------|
| <p><b>B1. Revenue Risk in User-pays PPPs</b><br/>           The risk of reduced revenues caused by more frequent climate events that obscure ridership and/or availability of service (e.g., reduced aircraft arrival/departure flow rates in airports due to prolonged periods of fog, decreased energy production due to climate-related supply changes).</p> |  | <p><b>Case 1. Internal climate risks (excluding cases of extreme events)</b><br/>           Given that the project has been adequately designed and appraised against those risks (i.e., the necessary adaptation works have been constructed), the risk of revenue loss should be low and primarily borne by the private party</p> <p><b>Case 2. Internal climate risks caused by extreme but predictable events</b> (exceeding the design limits of adaptation works)<br/>           This is the case of rare but high-impact climate events (e.g., storm, torrential rain, flood, high tide, lightning strike, a landslide caused by extreme or prolonged rainfall periods, etc.) that cause significant physical damage and prolonged disruptions to the project. The predictability of the event is a crucial differentiator in terms of risk allocation; events for which historic experience exists are usually considered insurable, and hence such risk is assumed by the private party (at the cost of an insurance premium)</p> <p><b>Case 3. Internal climate risks caused by extreme and unpredictable events</b> (overly exceeding the design limits of adaptation works)<br/>           It is essential to understand that what classifies as an unpredictable event—beyond any insurable extremes—is a matter of negotiation between the public and the private party based on the experience of past disasters. Unforeseen events are typically treated under the provisions of force majeure. It is also not uncommon to prescribe a benchmark intensity level above which the climate event is considered force majeure. Depending on the PPP law of the country of origin, different risk allocation practices may be applicable for force majeure</p> <p><b>Case 4. External climate risks.</b> Depending on the severity of the event and the level of revenue loss, there might be an established threshold/cap above which the contracting authority will bear/share the risk, and the private partner will be entitled to compensation</p> |                          |

|   |  |  |  |
|---|--|--|--|
| <p><b>B2. Climate Risk in Government-pays PPPs</b><br/>The risk of events affecting pre-determined performance and quality standards.</p>   |  | <p><b>Case 1. Internal climate risks</b> (excluding cases of outstanding climate risk). The private partner bears the risk of meeting the performance specifications under the contract (i.e., by ensuring that the works and the operational performance are of the necessary quality and level)</p> <p><b>Case 2. Internal climate risks caused by extreme but predictable events.</b> As in the respective B1 case above, the private party should obtain commercial insurance against such risks. If the cost of insurance is high, it may be covered through availability payment increases</p> <p><b>Case 3. Internal climate risks caused by extreme and unpredictable events.</b> As in the respective B1 case, these cases are typically covered under force majeure provisions, which means that the public sector primarily assumes the risk</p> <p><b>Case 4. External climate risks.</b> They refer to cases where a climate event has disrupted the availability of a significant resource/ utility, thus ultimately impacting the availability of the project itself. The private party bears the principal risk and responsibility of ensuring an uninterrupted supply of resources and providing redundancies when necessary. However, depending on the event's severity, there may be instances where the risk needs to be shared among parties.</p>   |  |
| <p><b>B3. Maintenance Cost and Standards</b><br/>The risk of increased maintenance costs (beyond modeled costs), potentially exacerbated by climate- change effects; the risk of non-compliance with the maintenance standards.</p> |  | <p>The private party will bear the principal risk of meeting the appropriate maintenance standards as set out in the performance specification. The system remains robust and is handed back in the expected condition. The private party should also assume the cost of increased maintenance (assuming that the impacts of increased maintenance due to climate change should be already included in the bidder pricing)</p>   |  |
| <p><b>B4. Finance Risk of Adaptation Works</b><br/>(applicable to adaptive plans only)<br/>The risk of meeting the financing requirements for the additional adaptation work at the time of the intervention.</p>                   |  | <p>Although the initial decision for implementing an adaptive plan (i.e., periodic climate adaptation works that are planned in advance following specific climatic scenarios) lies with the public authority, the public sector has reviewed and validated the rigorosity of the technical design and the project structure. From this standpoint, the risk of financing additional adaptation beyond those originally planned should be shared among parties</p>   |  |
| <p><b>B5. Force Majeure (Acts of God)</b><br/>The risk posed to the project by unprecedented climate events (such as hurricanes, storms, etc.) with potential extraordinary impacts on the asset performance.</p>                   |  | <p>Force majeure is a complex legal issue, as it differs between the civil code countries (where it is a legally defined concept, thus limiting the freedom of the parties to derogate from the legal concept), and those with common law jurisdictions where there is freedom between the parties to agree on the terms of the contract. Consequently, in civil code countries, a recommended practice is to define a non-exhaustive list of events in addition to a "catch-all definition" that ensures that the term includes all events that fall within the legally defined concept. In general law countries, it is common to include an exhaustive list of events that will be classified as force majeure in the contract</p> <p>The common ground in all cases, is that force majeure is typically treated as a shared risk where neither party is better placed than the other to manage the risk or its consequences. The final definition of force majeure should not be confirmed until both public and private entities agree. As climate change becomes the norm and the severity of climate events is increasing, it is in the interest of all parties to try and limit the cases that can be characterized as force majeure and rather attempt to consider such risks through alternative routes (e.g., through insurance or other financial tools)</p> |  |



|  |  |  |  |
|--|--|--|--|
| <p><b>B6. Disruptive Technology Risk</b><br/>The risk that a new emerging technology unexpectedly displaces an established technology, impacting the business model and/or the modeled cost (e.g., new equipment for maintenance having a high upfront cost or cost of purchasing satellite material for weather forecasts, etc.).</p> |  | <p>Responsibility for <b>disruptive technology risk depends</b> on the project circumstances. From a strict contractual standpoint, the private partner is responsible for meeting the output specifications (regardless of whether this is done with state-of-the-art or technologically obsolete resources). However, given the rapid climate-related technological advances, it is in the project's best interest to incorporate contractual provisions for the integration of new technologies and other foreseeable developments (e.g., projected uptake of electric and automated cars). The parties should also agree to a cost-sharing mechanism for such technological upgrades</p> |  |
|--|--|--|--|

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)



# ANNEX 4: CLIMATE REQUIREMENTS IN OPERATIONAL PROCEDURES

Procuring authorities that seek to harness the capacity, expertise, and innovation of the private sector to swiftly address extreme and catastrophic events can utilize the procurement process, including Requests for Proposals (RFPs) or Requests for Qualifications (RFQs), to incentivize the creation of innovative response strategies.

| <b>Climate requirements in operational procedures</b>  | <b>Included Yes/No</b> |
|--|------------------------|
| <b>International Performance Standards</b>   |                        |
| Environmental impact assessments should be revisited to include a risk and impact identification process associated with the changing climate and adaptation opportunities. It should also consider the emissions of greenhouse gases in the project area as well as potential transboundary effects (i.e., pollution of air or pollution of international waterways)  |                        |
| In projects posing potentially significant adverse impacts or where technically complex issues are involved, clients may be required to involve external experts to assist in the risks and impacts identification process   |                        |
| In high-risk circumstances, it may be appropriate to complement the environmental and social risks and impacts identification process with specific human rights due diligence as relevant to the particular business  |                        |
| Projects should adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimize, and—where residual impacts remain—compensate/offset for risks and impacts to workers, affected communities, and the environment  |                        |
| For projects that are expected to produce more than 25,000 tons of CO <sub>2</sub> , it is recommended that all emissions (both directly from the facilities owned or controlled within the physical project boundary and indirectly associated with the off-site production of energy used by the project) are properly quantified. Quantification will be conducted by the client annually in accordance with internationally recognized methodologies and good practice <sup>15</sup> |                        |
| The private party is expected to implement technically and financially feasible and cost-effective measures for improving efficiency in its consumption of energy, water, as well as other resources and material inputs—with a focus on areas that are considered core business activities. Where benchmarking data are available, the client will make a comparison to establish the relative level of efficiency  |                        |
| The project shall adopt measures to avoid or reduce water usage (e.g., water conservation measures, use of alternative water supplies, water consumption offsets, etc.)  |                        |
| Include provisions to avoid the generation of hazardous and non-hazardous waste materials, or at least reduce the generation of waste, and recover and reuse waste in a manner that is safe for human health and the environment   |                        |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

| <b>Climate requirements in operational procedures</b>   | <b>Included Yes/No</b> |
|---|------------------------|
| <b>Emergency Response Plans</b>   |                        |
| The Emergency Response Plan is a key element for incorporating climate considerations while conforming to existing laws and regulations on public works and the country's disaster risk management standards  |                        |
| The ERP considers gender gaps and aim to address gender inequalities that may occur during an emergency   |                        |
| Ensure that the ERP is clearly defined as one of the following:<br>1. the sole responsibility of the government (i.e., in case the government has already a strong disaster risk management plan, or if it does not wish to complicate the transaction process)<br>2. the sole responsibility of the private sector (i.e., when the government believes that the private sector can offer significant creativity)<br>3. a shared responsibility between parties |                        |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)



| <b>Climate requirements in operational procedures</b>  | <b>Included<br/>Yes/No</b> |
|--|----------------------------|
| <b>Operation And Maintenance (O&amp;M) Plans Include at a Minimum</b>  |                            |
| I) preventive or proactive maintenance procedures  |                            |
| II) dynamic planning and timing of the maintenance protocols to keep pace with the increased needs                       |                            |
| III) wide sensing and monitoring systems to measure the performance of KPIs and update maintenance strategies if needed. |                            |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

# ANNEX 5: CLIMATE- INFORMED PROPOSAL EVALUATION CRITERIA

| Climate informed proposal evaluation criteria |   |
|---|---|
| <b>Sustainability Criteria</b>                | <ul style="list-style-type: none"> <li>Innovative low carbon solutions</li> <li>Measures for improved energy efficiency</li> <li>Evidence of applying mitigation hierarchy protocols</li> </ul>   |
| <b>Climate Resilience Criteria</b>            | <ul style="list-style-type: none"> <li>Flexibility of the project to adapt to future climate scenarios</li> <li>Plans for quick recovery following extreme weather events</li> <li>Quality of climate elements in O&amp;M plan</li> <li>Insurance Coverage</li> </ul>                                 |
| <b>Innovation</b>                             | <ul style="list-style-type: none"> <li>Experience and specific provision in the design of early warning systems or rapid response systems</li> <li>Preventive maintenance strategies</li> <li>Inclusion of Nature-based Solutions in design</li> <li>Use of low-carbon materials in design</li> </ul> |
| <b>Excellence</b>                             | <ul style="list-style-type: none"> <li>Team with climate risk experts and experts in biodiversity and eco-system adaptation</li> </ul>  |
| <b>Inclusivity</b>                            | <ul style="list-style-type: none"> <li>Quality Gender Plan</li> <li>Quality of plan to improve resilience for local communities</li> </ul>  |

Source: Adapted from WBG Climate Toolkits for Infrastructure PPPs (2022)

# ANNEX 6: CLIMATE CHANGE RISK AND RESILIENCE RESOURCES

The following publications feature globally accepted best practices for mainstreaming of climate change mitigation and adaptation.

## **World Bank Group: Climate Toolkits for Infrastructure PPPs**

This toolkit aims to embed a climate lens and approach into upstream PPP advisory work and structuring. If structured correctly, PPPs can increase climate resilience offering innovative solutions to address both mitigation and adaptation challenges.

<https://openknowledge.worldbank.org/entities/publication/b79aaf21-6d08-56ce-93fe-f8c1976a7bf2>

## **Global Center on Adaptation: Climate-Resilient Infrastructure Officer Handbook**

The Handbook aims to build the upstream capacity of practitioners to integrate climate resilience into infrastructure PPPs. It identifies the key entry points across the PPP project cycle to integrate resilience and provides the necessary tools and knowledge for practitioners.

<https://gca.org/reports/climate-resilient-infrastructure-officer-handbook/>

## **World Bank Group: Climate Change Knowledge Portal**

The Climate Change Knowledge Portal (CCKP) provides global data on historical and future climate, vulnerabilities, and impacts.

<https://climateknowledgeportal.worldbank.org/>

## **World Bank Group Resilience Rating System: A Methodology for Building and Tracking Resilience to Climate Change (Vol. 2)**

This provides a methodology for evaluating the resilience of project design and, through project outcomes, aims to achieve better monitoring of adaptation and resilience-related action. It also includes guidance on ways to incorporate appropriate risk reduction measures into project design.

<https://documents.worldbank.org/en/publication/documents-reports/documentdetail/701011613082635276/summary>

## **World Bank Group: Country Climate and Development Reports (CCDRs)**

The CCDRs are new core diagnostic reports that integrate climate change and development considerations.

<https://www.worldbank.org/en/publication/country-climate-development-reports>

## **JICA: Climate Finance Impact Tool: Climate Fit (Adaptation)**

Guidelines for methodologies to assess climate risks and examine adaptation measures for different sectors.

[https://www.jica.go.jp/activities/issues/climate/ku57pq00001o9h2v-att/climate\\_fit\\_e.pdf](https://www.jica.go.jp/activities/issues/climate/ku57pq00001o9h2v-att/climate_fit_e.pdf)

## **THINK HAZARD!**

ThinkHazard! provides a general view of the hazards, for a given location, that should be considered in project design and implementation to promote disaster and climate resilience.

<https://thinkhazard.org/en/>



## **DATASHEET**

### **Editor:**

Ministério das Finanças e do Fomento Empresarial  
Unidade de Acompanhamento do Setor Empresarial do Estado (UASE)

### **Coordinator:**

Sandoney Fernandes

### **Technical:**

Indira R. Santos - Consultora Jurídica  
Leinilda de Jesus D. Pereira - Gestora de Carteira

### **Issue date:**

july 2024

Edifício Galerias, 5º piso, Plateau - Praia  
República de Cabo Verde

Tel.: +238 260 74 64



# Manual of Procedures for the Implementation of Public-Private Partnerships in Cabo Verde

Creating a country resilient to climate change!



Ministério das Finanças  
e do Fomento Empresarial

Unidade de Acompanhamento  
do Setor Empresarial do Estado