



**DEVELOPMENT BANK OF JAMAICA'S  
CLIMATE RELATED OPERATIONAL POLICY GUIDELINES FOR PUBLIC PRIVATE PARTNERSHIP PROJECTS**

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# LIVE DOCUMENT

To be reviewed and revised as required.

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# 1. Introduction

These guidelines were developed alongside an effort of the Development Bank of Jamaica, funded by the InterAmerican Development Bank, to update Jamaica's PPP Policy and practice to take into consideration climate and disaster risks. They are consistent with the revision of the *Policy and Institutional Framework for Implementation of a Public-Private Partnership Programme for the Government of Jamaica: "The PPP Policy"* as approved by Cabinet by way of Decision No. 11/23 dated March 27, 2023. In addition to DBJ's standard PPP-related operational forms, these guidelines offer resources to PPP project teams (e.g., "Enterprise Teams") that will help them integrate climate and disaster risk assessment into the PPP development and planning process.

The guidelines are organized by the project lifecycle. They pull heavily from *Climate Resilient Public-Private Partnerships: A Toolkit for Decision Makers* (May 2020, Inter-American Development Bank); though also bring in additional resources on climate risks by sector and force majeure. The guidelines also include sample terms of reference for hiring experts to conduct a Climate Risk Assessment.

While this document is being created as part of the Government of Jamaica's PPP Policy update, it should be seen as a "living" document that is updated with new information as the private investment in infrastructure market's treatment climate and disaster risk evolves and as Jamaica's resources and capacities available to conduct climate risks assessments and support the development of standardized disaster risk plans, among others, evolve.

## 2. Guidance by Project Phase

This section includes resources organized by project phase.

- 1. Embedding Climate Resilience at the PPP Project Identification Stage:** the assessments and guidance in this section will help DBJ/GoJ PPP teams ensure that their projects align with GoJ development goals and objectives (see 2.1.1 -2.1.3) as well as provide guidance that will help project teams think through, at a high-level, how climate risks can affect the potential project.



2.1.1 DBJ's Concept Assessment – PIMSEC Standard Template

2.1.2 DBJ's PPP Assessment Checklist

2.1.3 DBJ's PPP Comparison Assessment Chart

2.1.4 Project Identification Stage: Climate Risk Assessment

2.1.5 Template A: Screening-level Hazard Exposure Assessment

2.1.6 Template B: Screening-level Hazard Vulnerability Assessment

2.1.7 Template C: Screening-level Climate Risk Matrix

2.1.8 Template D: Screening-Level Climate Risk Action Plan

- 2. Embedding Climate Resilience at the PPP Business Case Stage:** this section provides guidance to help project teams think through how to embed climate resilience considerations into the various technical, financial, economic, environment analyses conducted to determine if the project is viable and best delivered as a PPP.



- 2.2.1 DBJ Outline for Review of Project Proposal and Business Case
- 2.2.2 DBJ PPP Assessment Checklist
- 2.2.3 DBJ PPP Comparison Assessment Chart
- 2.2.4 Climate Considerations for Risk Allocation
- 2.2.5 Risks by Sector and Consideration
- 2.2.6 Risk Valuation Methods for Climate-Resilient Infrastructure PPPs

- 3. Embedding Climate Resilience at the PPP Transaction Stage:** the guidance in this section of will help DBJ PPP teams/Enterprise teams think through how to embed climate resilience considerations into designing the contract, qualifying bidders, tendering the project, and evaluating bids received.



- 2.3.1 DBJ's Pre-Commercial Close Review
- 2.3.2 DBJ PPP Assessment Checklist
- 2.3.3 DBJ PPP Comparison Assessment Chart
- 2.3.4 Including Climate Resilience in the Request for Qualifications
- 2.3.5 High-level decision framework for including climate resilience in RFP Stage
- 2.3.6 Considerations for requiring implementation of 'Disaster Preparedness and Response plan' by bidder
- 2.3.7 Embedding Climate Resilience into PPP evaluation
- 2.3.8 Sample language for PPP contract on requirement to periodically update climate risk mitigation plan
- 2.3.9 Force Majeure considerations

- 4. Embedding Climate Resilience at the PPP Contract Management Stage:** the decision support tools in this section of the toolkit will help governments and project planners think through how to track any climate-related agreements set during the Transaction Stage and managing any unforeseen climate-related risks that occur over the life of the PPP.



2.4.1 Climate considerations in contract management

2.4.2 Enforcing climate resilience through the PPP payment mechanism



## 2.1 Project Identification Stage

### 2.1.1 DBJ's Concept Assessment – PIMSEC Standard Template

**\*\*Complete alongside PPP Assessment checklist and PPP Comparison Assessment Chart**

#### **REVIEW OF THE PROJECT CONCEPT SUMMARY FOR <Insert PROJECT NAME>**

---

##### **Overview of Public-Private Partnerships**

*Definition <use definition below>*

A public-private partnership (PPP) is defined as a contractual arrangement whereby a private firm (termed Concessionaire) finances the upfront investment to build, rehabilitate, maintain, and operate an infrastructure facility that provides services to the public. As repayment for their investment in capital, maintenance and operating costs, the firm receives user revenues, government payments or a combination of both. At the end of the concession the facility is returned to the state. In this arrangement the project risks are allocated to the party best able to bear the risk.

##### ***International and regional PPPs experience***

*<List PPP projects implemented locally, regionally, or globally within sector. Provide as much of the following information where available for projects identified:*

*Project size, contract length, location (including population size and GDP per capita of country)*

*Project objective and forecasted impact*

*Project sponsor (grantor) and private sector partner (concessionaire)*

*Project consultants*

*Project budget and any multilateral support received*

*Partnership structure and any government support or special waivers or subsidies granted to support the viability of the project*

*Comment on how a PPP structure could be used to address the current need of the local sector>*

##### **Outline and Summary of Project Concept**

*<Provide a summary of project concept highlighting the main features as described in the PCS that may/may not qualify the project as a PPP>*

##### **Commentary on PPP Criteria**

The comments outlined below are guided by the principles and considerations as outlined in the Government of Jamaica's PPP policy.

*Provide P4 comments based on the criteria in the PPP criteria outlined in the PPP Policy and summarized in the PPP Comparison Assessment Chart.*

- *Project Viability (including climate resilience)*
- *Project Marketability*
- *Capacity of Agency to undertake project*
- *Value for Money <refer to MOF>*
- *Fiscal Responsibility-at this stage, always recommend that the MOF provides guidance on the fiscal impact of the project.>*

### **Recommendation**

*<State any issues or concerns that must be addressed prior to proceeding to Business Case stage. State what level of climate risk the project has, per the screening tools (Templates A, B, C and D) found in the Appendix to the PPP policy and found in Sections 2.1.5, 2.1.6, 2.1.7, and 2.1.8 of these operational guidelines. If the project's risk profile is medium to high risk, it is encouraged that further climate analysis which serves to inform all aspects of the project's feasibility is done in the business case stage.*

*Recommendations should indicate whether the project is a candidate for a PPP, if so recommend that a complete Business Case is developed to justify the feasibility>*

## 2.1.2 DBJ's PPP Assessment Checklist

### PPP ASSESSMENT CHECKLIST

Project \_\_\_\_\_

Assessment: < [Project Concept](#), [Business Case](#), or [Prior to Commercial close](#) >

<to be completed when conducting assessments at identification, Business Case and prior to commercial close. Document to be attached to draft Assessment Report when submitting to Manager and GM >

Criterion	Definition	Question to check if the project meets the criteria	
<b>Project is Viable</b>			
Effective in meeting government objectives	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)
Technically feasible	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
Legally feasible	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)	Yes/No
		If not, attach an explanation of how the proposed project and PPP structure align with sector and other applicable laws.	

Criterion	Definition	Question to check if the project meets the criteria	
<b>Project is Viable</b>			
Environmentally compliant	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
Socially sustainable	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.	
Economically viable	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>Criterion</b>	<b>Definition</b>	<b>Question to check if the project meets the criteria</b>	
<b><i>Project is Viable</i></b>			
Climate Resilient	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 <sup>1</sup> been conducted? (Please attach)	<b>Yes/No</b>
		For those projects deemed to have "Medium" or "High" climate risk, please attach a list of identified climate risks and possible mitigation measures.	
<b><i>PPP represents a genuine business opportunity</i></b>			
PPP is a viable "commercial project"	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.	
Market has sufficient capacity and appetite	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?	

<sup>1</sup> A project identification stage, this will be a 'screening level' assessment. At business case stage, this will be a full climate risk assessment.

### 2.1.3 DBJ's PPP Comparison Assessment Chart

< To be completed at each assessment and to include a summary of the conclusions at each stage of the transaction. To be submitted to Manager and GM along with current assessment report for the previous assessments done.>

PROJECT NAME:				
Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
<b><i>Project is Viable</i></b>				
Effective in meeting government objectives	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>

**PROJECT NAME:**

Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
Technically feasible	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 final PPP contract is materially the same as that assessed by the feasibility study undertaken during the business case</i>
Legally feasible	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 project (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 (as defined for consideration as a PPP)</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 business case</i>

**PROJECT NAME:**

Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
Environmentally compliant	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 final PPP contract is materially the same as that considered in the environmental impact assessment undertaken during the business case</i>
Socially sustainable	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 final PPP contract is materially the same as that considered in the social impact assessment undertaken during the business case</i>



**PROJECT NAME:**

Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
Economically viable	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 analysed 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 analysed 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 final PPP contract is materially the same as that considered in the economic analysis undertaken during the business case</i>
Climate Resilient	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.	<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 (See 2.1.4 of these operational guidelines for Climate Risk Assessment).</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 business case stage.</i>

## 2.1.4 Project Identification Stage: Climate Risk Assessment

### Why is climate risk important during this stage?

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

- i) whether to pursue the project at all (a project with high climate risk might be determined as too risky)
- ii) whether the project location and/or scope needs to be changed (to minimize the risk)
- iii) whether the climate risks affect the decision to pursue a traditional delivery model or a PPP structure
- iv) which in-depth analysis is required in the next stage (in order to reserve appropriate time, expertise, and budget)

With the help of the *four templates that follow*, teams can, at a high level, assess a project's climate risk and start to identify ways to mitigate these risks. These four templates are based on the general definition of disaster and climate risk and lead the user from understanding the project's exposure to hazards, its vulnerability to these hazards, and the intensity of the risk.

- **Template A** considers the EXPOSURE of the project to various climate risk events (hazards)  
Key question it tries to answer: What is the likelihood of occurrence of various climate risk events (hazards) in my project area now, and in the future?
- **Template B** assesses the VULNERABILITY of the project to various climate risk events (hazards) to which it is exposed.  
Key question it tries to answer: How significant would the damage to my project be if any of the climate risk events (hazards) would occur?
- **Template C** concludes on the RISK LEVEL per hazard of the project.  
Key question it tries to answer: What is the project's risk profile for each of the hazards and combined?
- **Template D** provides a structure for looking at each individual risk and identifying ways to examine those risks further or mitigate against them.  
Key question it tries to answer: How can various climate risks to the project be mitigated against?

## 2.1.5 Template A: Screening-level Hazard Exposure Assessment

This template provides a guide to help PPP project planners identify the relevant hazards to which their project is exposed. It is not a hazard assessment tool, though provides the user with a structured decision-making framework. Users can rely on publicly available tools to conduct a climate hazard assessment.

This template is loosely aligned with Tool 1.1 of *Climate Resilient Public Private Partnerships: A Toolkit for Decision Makers*.<sup>2</sup> Users are encouraged to use *ThinkHazard!* (<https://thinkhazard.org/en/>) to help with this exposure screening alongside the Jamaica-specific resources listed in Section 4.

Project Name: \_\_\_\_\_

No.	Hazards <sup>3</sup>	Rating: High; Medium; Low
1	River Flood	
2	Urban Flood	
3	Coastal Flood	
4	Earthquake	
5	Landslide	
6	Tsunami	
7	Volcano	
8	Cyclone	
9	Water Scarcity	
10	Extreme Heat	
11	Wildfire	

**Scoring methodology<sup>4</sup>:** Use the following legend to score the exposure to the hazard.

Exposure Level	Definition
Low	If natural hazards are not likely to occur during construction and/or operational life of the project.
Medium	If the hazard is likely to occur at least once during the execution (construction) period and/or the operational life of the project.
High	If hazards may occur several times during the execution (construction) period and/or the operational life of the project.

<sup>2</sup> <https://publications.iadb.org/en/climate-resilient-public-private-partnerships-a-toolkit-for-decision-makers>

<sup>3</sup> For ease of use, the hazard list in this screening tool has been aligned with those hazards presented in the "*ThinkHazard!*" online tool. Cyclone is another name for hurricane.

<sup>4</sup> Methodology adapted from: Adapted from: IDB Disaster Risk Policy Guidelines, 2008. Available at: <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=360026>. If *ThinkHazard!* is used, a score of high, medium, or low to the hazard will be given.

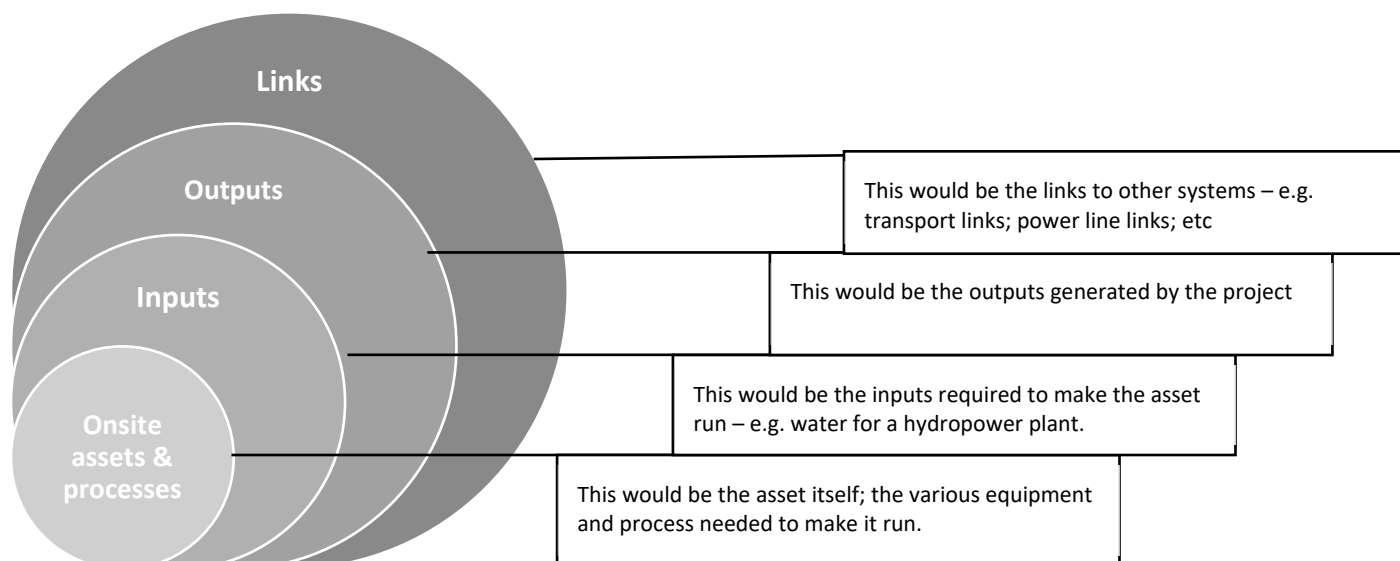
## 2.1.6 Template B: Screening-level Hazard Vulnerability Assessment

This template will help PPP project teams determine whether a hazard common to Jamaica (e.g., flooding), has an impact for the project being assessed.

\*Corresponds with Tool 1.2 of *Climate Resilient Public Private Partnerships: A Toolkit for Decision Makers*<sup>5</sup>.

When filling out this template it may be helpful to brainstorm with others. Users may find the “common risks by sector” tables in Section 2.2.5 helpful in conducting this exercise.

Further, when filling out users may wish to apply the ‘lifecycle framework’. Working and thinking through this framework, project teams will examine the project’s vulnerability through four lenses relating to its value chain: i) onsite assets and processes; ii) inputs; iii) outputs; and iv) links. Organizing the review in this way, can help project teams ensure that they are examining the project’s vulnerability from all dimensions. Not all projects will require all lenses – e.g., some projects, perhaps a road, will not have many required inputs. When evaluating such projects, which lack a lens, exclude that lens from the analysis. This is an optional step, though one project team may want to consider, especially if the project is large (i.e., costly). Structuring the analysis in this way could also provide benefits during the business case stage when project risk allocation strategies are decided. This is because this lifecycle framework analysis may lead project teams to more clearly understand aspects of the project that are vulnerable, which could make choosing mitigation strategies easier.



<sup>5</sup> <https://publications.iadb.org/en/climate-resilient-public-private-partnerships-a-toolkit-for-decision-makers>

Project Name: \_\_\_\_\_

No.	Hazards	Significance of damage if climate risk event occurs: High; Medium; Low	Narrative Description of damage that could be incurred by hazard
1	<i>River Flood</i>	If deploying 'life-cycle' framework, include significance by – onsite asset, inputs, outputs, links.	If deploying 'life-cycle' framework, provide description of potential damage to be incurred by onsite asset, inputs, outputs, links.
2	<i>Urban Flood</i>		
3	<i>Coastal Flood</i>		
4	<i>Earthquake</i>		
5	<i>Landslide</i>		
6	<i>Tsunami</i>		
7	<i>Volcano</i>		
8	<i>Cyclone</i>		
9	<i>Water Scarcity</i>		
10	<i>Extreme Heat</i>		
11	<i>Wildfire</i>		

**Scoring methodology:** Use the following legend and personal judgement to score the exposure to the hazard.

Vulnerability Level	Definition
<i>Low</i>	Project aspect not affected by a particular hazard, e.g., water scarcity is not expected to affect airport passenger services
<i>Medium</i>	Project aspect somewhat vulnerable to particular hazard, e.g., wildfires that come near airport could affect functioning of airport
<i>High</i>	Project aspect very vulnerable to a particular hazard, e.g., airport located near sea would be very sensitive to a hurricane storm surge

## 2.1.7 Template C: Screening-level Climate Risk Matrix

This final screening level, climate risk assessment template, helps project teams come to a high-level conclusion of whether a project is at a low, medium, or high risk for impacts from climate change. This tool builds on the information and outputs of Templates A and B.

\* Corresponds with Tool 1.3 of *Climate Resilient Public Private Partnerships: A Toolkit for Decision Makers*<sup>6</sup>

Project Name: \_\_\_\_\_

		EXPOSURE		
		Low	Medium	High
VULNERABILITY	Low	<i>e.g. drought risk (project is not exposed nor is vulnerable to drought risk)</i>		
	Medium			
	High			<i>e.g. flood risk (project is highly exposed and highly vulnerable to flood risk)</i>

<sup>6</sup> <https://publications.iadb.org/en/climate-resilient-public-private-partnerships-a-toolkit-for-decision-makers>

Table 1: Scoring Methodology for Project Climate Risk<sup>7</sup>

Risk Level by Hazard	How this pertains to project risk
<i>Low (low-low)</i>	If <b>ALL</b> risks fall in this category the project is deemed as low risk. The project team can continue with project development with no need for studies or measures in addition to what the team would do for the PPP project. However, bear in mind that this is a high-level risk screening and thus, monitor the climate and geophysical risks to the project as it is developed and implemented.
<i>Medium (low-medium; medium-low; medium-medium; high-low; low-high)</i>	If <b>ANY</b> climate or geophysical risks fall in this category, the project is deemed <b>MEDIUM</b> risk. The project team is encouraged to build on the screening through additional studies, consultation, and dialogue.
<i>High (high-medium; medium-high; high-high)</i>	If <b>ANY</b> climate or geophysical risks fall in this category, the project is deemed <b>HIGH</b> risk. Project team strongly encouraged to conduct a more detailed risk assessment and to explore measures to manage or reduce those risks.

<sup>7</sup>Methodology adapted from: Adapted from: IDB Disaster Risk Policy Guidelines, 2008. Available at: <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=360026>

## 2.1.8 Template D: Screening-Level Climate Risk Action Plan

HAZARD/RISK LEVEL	CHECK ONE				FOR RISKS WITH HIGH, MEDIUM, AND/OR HAVING POOR DATA, LIST MEASURES TO BE TAKEN (IF USING THE LIFECYCLE ANALYSIS FROM TEMPLATE B, CONSIDER ORGANIZING MEASURES BY: ONSITE ASSETS, INPUTS, OUTPUTS, LINKS)
	HIGH	MEDIUM	LOW	POOR DATA	
River Flood					
Urban Flood					
Coastal Flood					
Earthquake					
Landslide					
Tsunami					
Volcano					
Cyclone					
Water Scarcity					
Extreme Heat					
Wildfire					

Table 1: Guidance for project teams on when and how to further examine climate and geophysical risks<sup>8</sup>

High Risk	Project team 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 <i>Medium Risk</i> , project team is encouraged to build on the screening through additional studies, consultation, and dialogue.
Low Risk	If project team is confident that climate and geophysical risks pose <i>Low Risk</i> to the project, continue with project development. However, bear in mind that this is a high-level risk screening and thus, monitor the climate and geophysical risks to the project as it is developed and implemented.
Poor Data	Gather more information to improve your understanding of climate and geophysical hazards and their relation to the project.

<sup>8</sup> Modeled after World Bank guidance to project teams.



## 2.2 Business Case

### 2.2.1 DBJ Outline for Review of Project Proposal and Business Case

#### REVIEW OF THE PROJECT PROPOSAL AND BUSINESS CASE FOR <Insert PROJECT NAME>

---

##### 1. BACKGROUND

- 1.1 Objectives
  - State objectives of Government and the aims of the transaction/project.
  - Describe the public investment project and issues it intends to resolve or public good or service to be provided.
  - State PPP structure that is being examined.
- 1.2 Project Promoters
  - Promoting Department/Agency
  - Ministry
- 1.3 GOJ Approvals
  - Cabinet Decision no/ date
  - PIMSec date of letter

##### 2. PRE-FEASIBILITY ASSESSMENT (if applicable)

- State conclusions of pre-feasibility and DBJ's assessment (attach DBJ letter).
- What were the preliminary conclusions on Viability (technological, social, environmental, economic, legal, and climate risk) and DBJ's assessment of those conclusions?
- State conclusions on marketability and DBJ's assessment of those conclusions
- Comment on the Ministry/Agency capacity to execute.
- Confirm DBJ's recommendation to next stage.
- State any concerns that were highlighted by DBJ for further assessment /resolution in *Business Case*.

##### 3. BUSINESS CASE EVALUATION METHODOLOGY

The DBJ and Ministry of Finance (MoF) evaluate the proposed PPP structure at each stage (Project Identification Stage, Business Case and Transaction Phase) against the following four PPP Criteria:

1. **Project Viability** — the project makes sense, in that it is effective in meeting government objectives, technically and legally feasible, environmentally compliant, socially sustainable, economically viable, and climate resilient.
2. **Value for money** — is net economic benefit from the project higher if it is done as a PPP rather than as a conventional public project?
3. **Project Marketability** — is this a commercial project that there is market appetite for?
4. **Fiscal responsibility** — will the fiscal commitments under the PPP be affordable and sustainable?

The DBJ's review is focused on Project Viability and Marketability, while the MOF will assess Value-for-Money and Fiscal Responsibility.

### **3.2 PPP Project Assessment**

The DBJ's review is focused on Project Viability and Marketability

#### **3.2.1 Project Viability**

What is being examined: Is this effective in meeting government objectives, technically and legally feasible, environmentally compliant, socially sustainable, economically viable, and climate resilient?

##### **3.2.1a Meeting Government Objectives**

Identify the GoJ objective(s) and indicate how the project will facilitate the achievement of said objective(s).

##### **3.2.1b Technical Feasibility**

Technology (mature/nascent), risk of obsolescence

##### **3.2.1c Legal Feasibility**

Is the proposed structure legally viable? Is there any legislation that precludes the private sector from assuming the provision of the service to the public/users or Government? How will the payment mechanism be implemented? Any issues related to parties executing the contract/concession?

##### **3.2.1d Environmental Compliance**

Any known environmental impact issues: are NEPA or other licenses required?

##### **3.2.1e Social Sustainability**

Social impact. Have any consultations been held with stakeholders?

### 3.2.1f Economic Viability

Results of Cost /Benefit Analysis

### 3.2.1g Climate Resilient

- *[Note: complete section only if project was deemed to have medium to high risk in Project Identification stage]*
- Provide a narrative summary of the Climate Risk Assessment, including:
  - o What are the key risks to the project?
  - o What is their level of severity (high, medium, low)?
  - o What are the key measures (e.g. technical, regulation, policy, planning, change in project scope, etc.) that will be taken to mitigate against those climate risks?

## Recommendations of Project Viability

### 3.2.2 Marketability

What is being examined:

- (1) Is the PPP a viable commercial project?

Financial/Commercial Viability: Results of Financial Analysis (NPV, IRR), Are the underlying assumptions sound? What are the results of the Sensitivity analyses? State any issues that may impact the financial and commercial viability of the project and hence returns to the investor.

- (2) Does the market have sufficient capacity and appetite?

- a. What were the results of the market study?
- b. Were there any limitations of the study?
- c. Are the conclusions reasonable?

- (3) Comment on the Ministry/Agency's capacity to execute and monitor in relation to availability of resources.

Comment on the financial capacity of the Owning entity in relation to their financial status  
What were the results of the financial analysis?

If a government pay type PPP, can Agency fulfil payment obligations?

## **Recommendations on Marketability**

### **3.3 Project Risks**

Indicate and provide an analysis of the risk matrix /allocation of structure contemplated. Make sure to include allocation and discussion of how climate risks will be treated.

### **4. CONCLUSION/RECOMMENDATIONS**

State any issues or concerns raised in the Business Case that must be addressed prior to transaction or that will impede the transaction.

Does the MDA have the capacity to effectively monitor the concession? State any recommendations in that regard?

**Prepared by: PPP & Privatisation Division, DBJ**

**Date:**

## 2.2.2 DBJ PPP Assessment Checklist

### PPP ASSESSMENT CHECKLIST

Project \_\_\_\_\_

Assessment: < *Project Concept, Business Case, or Prior to Commercial close* >

<to be completed when conducting assessments at identification, Business Case and prior to commercial close. Document to be attached to draft Assessment Report when submitting to Manager and GM >

Criterion	Definition	Question to check if the project meets the criteria	
<b>Project is Viable</b>			
Effective in meeting government objectives	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)
Technically feasible	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
Legally feasible	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)	Yes/No
		If not, attach an explanation of how the proposed project and PPP structure align with sector and other applicable laws.	

Criterion	Definition	Question to check if the project meets the criteria	
<b>Project is Viable</b>			
Environmentally compliant	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
Socially sustainable	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.	
Economically viable	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>Criterion</b>	<b>Definition</b>	<b>Question to check if the project meets the criteria</b>	
<b><i>Project is Viable</i></b>			
Climate Resilient	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 <sup>9</sup> been conducted? (Please attach)	<b>Yes/No</b>
		For those projects deemed to have "Medium" or "High" climate risk, please attach a list of identified climate risks and possible mitigation measures.	
<b><i>PPP represents a genuine business opportunity</i></b>			
PPP is a viable "commercial project"	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.	
Market has sufficient capacity and appetite	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?	

<sup>9</sup> A project identification stage, this will be a 'screening level' assessment. At business case stage, this will be a full climate risk assessment.

### 2.2.3 DBJ PPP Comparison Assessment Chart

< To be completed at each assessment and to include a summary of the conclusions at each stage of the transaction. To be submitted to Manager and GM along with current assessment report for the previous assessments done.>

PROJECT NAME:				
Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
<b><i>Project is Viable</i></b>				
Effective in meeting government objectives	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>



**PROJECT NAME:**

Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
Technically feasible	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 final PPP contract is materially the same as that assessed by the feasibility study undertaken during the business case</i>
Legally feasible	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 project (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 (as defined for consideration as a PPP)</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 business case</i>

**PROJECT NAME:**

Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
Environmentally compliant	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 final PPP contract is materially the same as that considered in the environmental impact assessment undertaken during the business case</i>
Socially sustainable	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 final PPP contract is materially the same as that considered in the social impact assessment undertaken during the business case</i>

**PROJECT NAME:**

Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
Economically viable	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 analysed 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 analysed 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 final PPP contract is materially the same as that considered in the economic analysis undertaken during the business case</i>
Climate Resilient	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.	<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 (See 2.1.4 of these operational guidelines for Climate Risk Assessment).</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 business case stage.</i>

## 2.2.4 Climate Considerations for Risk Allocation<sup>10</sup>

The PPP market practice is evolving and more and more, greater focus is being placed on events caused by climate change. Procuring authorities and investors alike are/or should be considering potential impacts of climate and disaster-related risks – both the gradual changes and the one-off extreme events— on their infrastructure.

Who bears the risks associated with climate change in a PPP agreement? In most cases these risks will be *shared*; however, *in certain circumstances, these risks may need to be borne by the public party*. Circumstances that may necessitate that these risks be borne by the public party could occur when the climate changes impacting the project were not foreseeable at the outset but require retrofitting measures or variations in project scope, the costs of which cannot be passed on through user fees or allocated elsewhere.

It may be possible to treat some climate-related events as force majeure beyond a certain threshold (e.g., a certain category of storm, or [x] centimeters of rainfall within a certain timeframe). But project teams should also take the time to build resilience into the project design so that the project may continue to operate even in the face of gradual climate changes and extreme events – initial screening tools to help with this process are found in Sections 2.1.5, 2.1.6, 2.1.7, 2.1.8, examples of climate risks that would impact certain sectors are found in Section 2.2.5 and a sample TOR for conducting a Climate Risks Assessment is found in Section 3.

Procuring authorities can also use contractual levers to incentivize private parties to mitigate and/or manage certain climate risks (see 2.3.5 and 2.3.8 for some guidance on this).

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<sup>10</sup> Please see discussions on climate risk in the GI Hub's PPP Risk Allocation Tool (2019), found here: <https://www.gihub.org/resources/publications/ppp-risk-allocation-tool-2019-edition/>

## 2.2.5 Risks by Sector and Consideration<sup>11,12</sup>

### 2.2.5.1 Energy

Sector	Subsector	Hazard	Potential Impact
Energy	Oil, Gas and Coal Mining	Flood (and Storm surge)	May cause physical damage to extraction and processing facilities and disrupt operations
Energy	Oil, Gas and Coal Mining	Drought	May affect extraction and processing of fossil fuel resources as these are water intensive
Energy	Thermal Power Generation	Extreme Heat	May reduce efficiency of power generation; to extent there is increased water temperatures, leads to increased risk of exceeding thermal discharge limits (into bodies of water)
Energy	Thermal Power Generation	Water Scarcity	May lead to reduced availability of cooling water
Energy	Thermal Power Generation	Cyclone	May lead to increased risk of physical damage and disruption to facilities
Energy	Hydropower	Floods, Water Scarcity, Extreme Heat	May impact hydropower plant's ability to operate properly due to changes in water flows.
Energy	Hydropower	Cyclone (heavy precipitation of)	May cause erosion and sedimentation to occur in waterways, reducing reservoir capacity. Strong winds may lead to overtopping of dams and reservoirs
Energy	Solar	Any hazard	May damage the solar infrastructure
Energy	Solar	Extreme Heat	Reduction in generating efficiency
Energy	Wind	Any hazard	May damage the wind infrastructure
Energy	Wind	Extreme Heat	May damage equipment that operates wind turbine, causing it to overheat

<sup>11</sup> These climate/disaster risks and impacts are not comprehensive. Each project should go through a process whereby risks are identified and examined, including climate and disaster-related risks.

<sup>12</sup> Inspiration for tables of risks and impacts comes from World Bank Sector Guidance for "Climate and Disaster Risk Screening" as well as from *Emerging Trends in Mainstreaming Climate Resilience in Large Scale, Multi-Sector Infrastructure PPPs*. World Bank 2016.

<b>Energy</b>	Transmission & Distribution	Cyclone	May cause physical damage
<b>Energy</b>	Transmission & Distribution	Extreme Heat	May lead to reduced transmission efficiency and available transmission capacity.

**2.2.5.2 Water and Sanitation**

<b>Sector</b>	<b>Subsector</b>	<b>Hazard</b>	<b>Potential Impact</b>
<b>Water</b>	Solid Waste	Flooding	Could lead to contamination of ground water.
<b>Water</b>	Water Supply	Extreme Heat	May increase water demand for industrial use; cooling in energy generation or irrigation
<b>Water</b>	Water Supply	Flooding, Cyclone	May lead to increased runoff which can introduce new contaminants into the water supply, increasing the pollutant load.
<b>Water</b>	Water Supply	Water Scarcity	Due to drought can lead to higher concentrations of contaminants as well as can reduce recharge to surface and groundwater supplies thereby impacting water pumping needs.
<b>Water</b>	Wastewater	Extreme Heat	May increase algal blooms and pathogens and decrease dissolved oxygen, necessitating enhanced wastewater treatment.
<b>Water</b>	Wastewater	Flooding, Cyclone	May lead to sewers overflowing, resulting in floods of combined sewer systems.
<b>Water</b>	Irrigation	Extreme Heat	May lead to higher levels of evapotranspiration.

### 2.2.5.3 Transport

Sector	Subsector	Hazard	Potential Impact
<b>Transportation</b>	Roads	Extreme Heat	May lead to deterioration of road surface integrity; may lead to thermal expansion of bridge joints and paved surfaces.
<b>Transportation</b>	Roads	Cyclone, flooding	May lead to damage of highways, underground tunnels and bridges due to inundation.
<b>Transportation</b>	Roads	Wildfire	May cause damage to asphalt. Will prevent traffic from using road.
<b>Transportation</b>	Rail	Flooding, Cyclone	May cause track washout and bridge scour.
<b>Transportation</b>	Rail	Extreme Heat	May cause track buckling.
<b>Transportation</b>	Aviation	Flooding, Cyclone	May damage runways and parked aircraft.
<b>Transportation</b>	Aviation	Extreme Heat	May cause buckling of airport runway, pavements and access roads.
<b>Transportation</b>	Ports	Cyclone, flooding	May damage marine port buildings and equipment, including damage to structures from increased wave and water loads and increased corrosion due to exposure to salt water.
<b>Transportation</b>	Ports	Extreme Heat	May cause buckling of access roads and port's paved structures. May impact health and safety of port workers.
<b>Transportation</b>	Ports	Cyclone, flooding	May lead to increased erosion and sedimentation around harbors and access channels.

#### 2.2.5.4 Social

Sector	Subsector	Hazard	Potential Impact
<b>Social</b>	Prisons	Extreme Heat	If prison facility does not have adequate cooling, it could put the lives of prisoners at risk when conditions are too hot.
<b>Social</b>	School	Extreme Heat	If school facilities do not have adequate cooling, it could put the lives of students at risk when conditions are too hot.
<b>Social</b>	School, Prison, Buildings	Flooding	May lead to flooding of building facilities and hence inability to use.



## 2.2.6 Risk Valuation Methods for Climate-Resilient Infrastructure PPPs

*This sub-section comes from the Climate Resilient Public Private Partnerships, Inter-American Development Bank, May 2020.*

Once climate risks have been identified, it is important to value them within the context of the PPP project itself. How will the various identified risks affect the project's revenue streams or costs? This analysis is important building block to other 'Business-Case' Stage analyses like the financial feasibility and cost benefit analysis; thus, it is important to conduct it carefully.

Several methods exist for performing risk valuation. While this tool does not delve into each of the methods in detail, it provides Project Teams with guidance on how to select the method best suited to their project and resources.

**When in PPP process to use:** in parallel to feasibility studies

**Length of time to implement:** a few hours, to a couple days (a few conversations)

**Stakeholders involved:** Project Team; Climate Advisors; Climate Team

**Expertise Required:** Project related expertise; Climate Expertise

**Reference Materials:**

- IDB Climate Risk Assessment Methodology

## Guiding Questions: Choosing the Optimal Risk Analysis Method

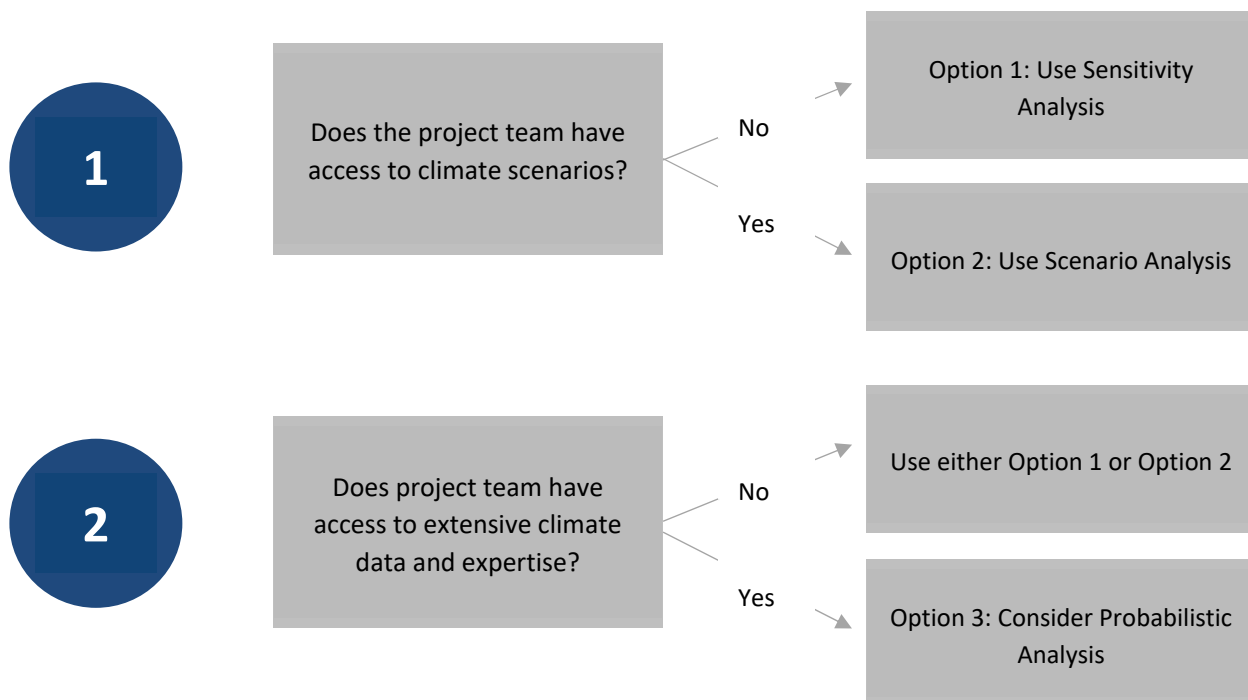


Table 2: Risk Analysis Methods

<i>Method</i>	<i>Description</i>	<i>When to Use</i>
<b>Scenario Analysis</b>	Assessment of possible future developments by considering alternative possible comprehensive sets of outcomes (sometimes called "alternative worlds"). In the case of climate risk, it could be the assessment of various climate change scenarios, intervention, and impacts. Based on an officially defined and agreed baseline, all costs and benefits (CBA) or revenues (financial analysis) will be defined for the scenarios. The project is robust if the outcomes are positive in all scenarios.	This is the recommended option – especially if officially defined climate scenarios exist. This option can help standardize the analysis of risk in PPP projects.
<b>Sensitivity Analysis</b>	Assessment of how changes in a specific model variable impacts the output of the model. In the case of climate risk, it could be the assessment of the impacts of the occurrence of a climate risk event (with a defined financial impact).	If the project team does not have access to climate scenarios this method can be used. This is the 'second-best' option.
<b>Probabilistic Analysis</b>	A group of techniques that incorporate variability and uncertainty into the risk assessment process. It provides estimates of the range and likelihood of a hazard, exposure or risk of all scenarios, rather than a single point estimate (deterministic approach)	If the project team has access to extensive climate data and expertise. This is a more costly exercise.

## 2.3 Transaction Stage

### 2.3.1 DBJ's Pre-Commercial Close Review

#### PRE-COMMERCIAL CLOSE REVIEW OF THE *<Type of Agreement>* AGREEMENT FOR *<PROJECT NAME>*

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*\*\*\*\*\*<To be completed along with PPP Assessment checklist and PPP Comparison Assessment Chart>\*\*\*\*\**

#### OVERVIEW OF PROJECT

*<Include main terms from the contractual structure which may include but not limited to the terms in the table below. Include any major changes with structural terms since Business Case assessment>*

	<b>Terms @ Business Case Stage</b>	<b>Current Terms</b>
Contract Period		
Construction		
Operational Period		
Payment		
Capital Cost		
Concessionaire IRR		
Concession Fee		

#### PPP CRITERIA & ASSESSMENT

The Policy and Institutional Framework for Implementation of a Public-Private Partnership Programme for the Government of Jamaica: The PPP Policy prescribes the GoJ's assessment of PPPs based on the following criteria:

- Project Viability - the project makes sense, in that it is effective in meeting government objectives, technically and legally feasible, environmentally compliant, socially sustainable, economically viable, and climate resilient.
- Project Marketability- is this a commercial project that there is market appetite for?
- Value for money - is net economic benefit from the project higher if it is done as a PPP rather than as a conventional public project?
- Fiscal responsibility- will the fiscal commitments under the PPP be affordable and sustainable?

The DBJ's review is focused on criteria 1 and 2, while criteria 3 and 4 above are the purview of the Ministry of Finance and Public Service (MOF PPP Unit).

The comments below are guided by the principles and considerations as outlined in the Government of Jamaica's PPP policy based on the information provided in the draft Cabinet Submission dated *<date>* and the draft Agreement dated *<date>*. The project was evaluated against the PPP criteria to ensure that technical, legal and economic, social environmental, climate resilient viability are satisfied and maintained since the Business Case assessment in *<date>*.

## **Project Viability**

*<Since the Business Case, does the project continue to meet the criteria below. Expound how the project has/has not remained feasible under the listed criteria per the PPP Criteria Comparison Assessment Chart>*

- **Meeting Government Objectives**
- **Technical Feasibility**
- **Legal Feasibility**
- **Environmental Compliance**
- **Social Sustainability**
- **Economic Viability**
- **Climate Resilience**
- **Marketability/Commercial Viability**
- **Managerial Capacity of the Monitoring Entity**

**DEAL BREAKER ISSUES/ CONCERNING MATTERS**

*<Identify dealbreakers/ concerning matters identified during negotiations and DBJ's recommendation based on lessons learned from previous transactions>*

**CONCLUSIONS**

*<Provide an objection/no-objection for Ministry/Department/Agency to seek Cabinet approval for the final terms of the agreement and provide any recommendations necessary to conclude the process.>*

## 2.3.2 DBJ PPP Assessment Checklist

### PPP ASSESSMENT CHECKLIST

Project \_\_\_\_\_

Assessment: < [Project Concept](#), [Business Case](#), or [Prior to Commercial close](#) >

<to be completed when conducting assessments at identification, Business Case and prior to commercial close. Document to be attached to draft Assessment Report when submitting to Manager and GM >

Criterion	Definition	Question to check if the project meets the criteria	
<b>Project is Viable</b>			
Effective in meeting government objectives	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)
Technically feasible	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
Legally feasible	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)	Yes/No
		If not, attach an explanation of how the proposed project and PPP structure align with sector and other applicable laws.	

Criterion	Definition	Question to check if the project meets the criteria	
<b>Project is Viable</b>			
Environmentally compliant	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
Socially sustainable	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.			
Economically viable	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>Criterion</b>	<b>Definition</b>	<b>Question to check if the project meets the criteria</b>	
<b><i>Project is Viable</i></b>			
Climate Resilient	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 <sup>13</sup> been conducted? (Please attach)	<b>Yes/No</b>
		For those projects deemed to have "Medium" or "High" climate risk, please attach a list of identified climate risks and possible mitigation measures.	
<b><i>PPP represents a genuine business opportunity</i></b>			
PPP is a viable "commercial project"	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.	
Market has sufficient capacity and appetite	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?	

<sup>13</sup> A project identification stage, this will be a 'screening level' assessment. At business case stage, this will be a full climate risk assessment.



### 2.3.3 DBJ PPP Comparison Assessment Chart

< To be completed at each assessment and to include a summary of the conclusions at each stage of the transaction. To be submitted to Manager and GM along with current assessment report for the previous assessments done.>

PROJECT NAME:				
Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
<b><i>Project is Viable</i></b>				
Effective in meeting government objectives	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>

**PROJECT NAME:**

Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
Technically feasible	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 final PPP contract is materially the same as that assessed by the feasibility study undertaken during the business case</i>
Legally feasible	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 project (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 (as defined for consideration as a PPP)</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 business case</i>

**PROJECT NAME:**

Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
Environmentally compliant	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 final PPP contract is materially the same as that considered in the environmental impact assessment undertaken during the business case</i>
Socially sustainable	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 final PPP contract is materially the same as that considered in the social impact assessment undertaken during the business case</i>

**PROJECT NAME:**

Criterion	Definition	Extent		
		Initial Screening	Business Case	Prior to Contract Signing
Economically viable	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 analysed 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 analysed 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 final PPP contract is materially the same as that considered in the economic analysis undertaken during the business case</i>
Climate Resilient	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.	<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 (See 2.1.4 of these operational guidelines for Climate Risk Assessment).</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 business case stage.</i>

### 2.3.4 Including Climate Resilience in the Request for Qualifications

*This sub-section comes from the Climate Resilient Public Private Partnerships, Inter-American Development Bank, May 2020.*

The following tool provides guidance on how to consider including climate resilience in the Request for Qualification (RFQ) Stage, as part of the pre-qualification criteria. As during this stage, the goal is to determine whether the competencies of the potential bidding teams are adequate, this tool focuses on how to garner information to understand whether the prospective bidding teams have experience and qualifications with regards to managing climate and disaster risk.

**When in PPP process to use:** If the PPP will undergo a two-step procurement, whereby bidders will need to qualify based on their previous experience in order to have the chance to submit a proposal at the Request for Proposal stage, use this tool to consider including climate resilience considerations.

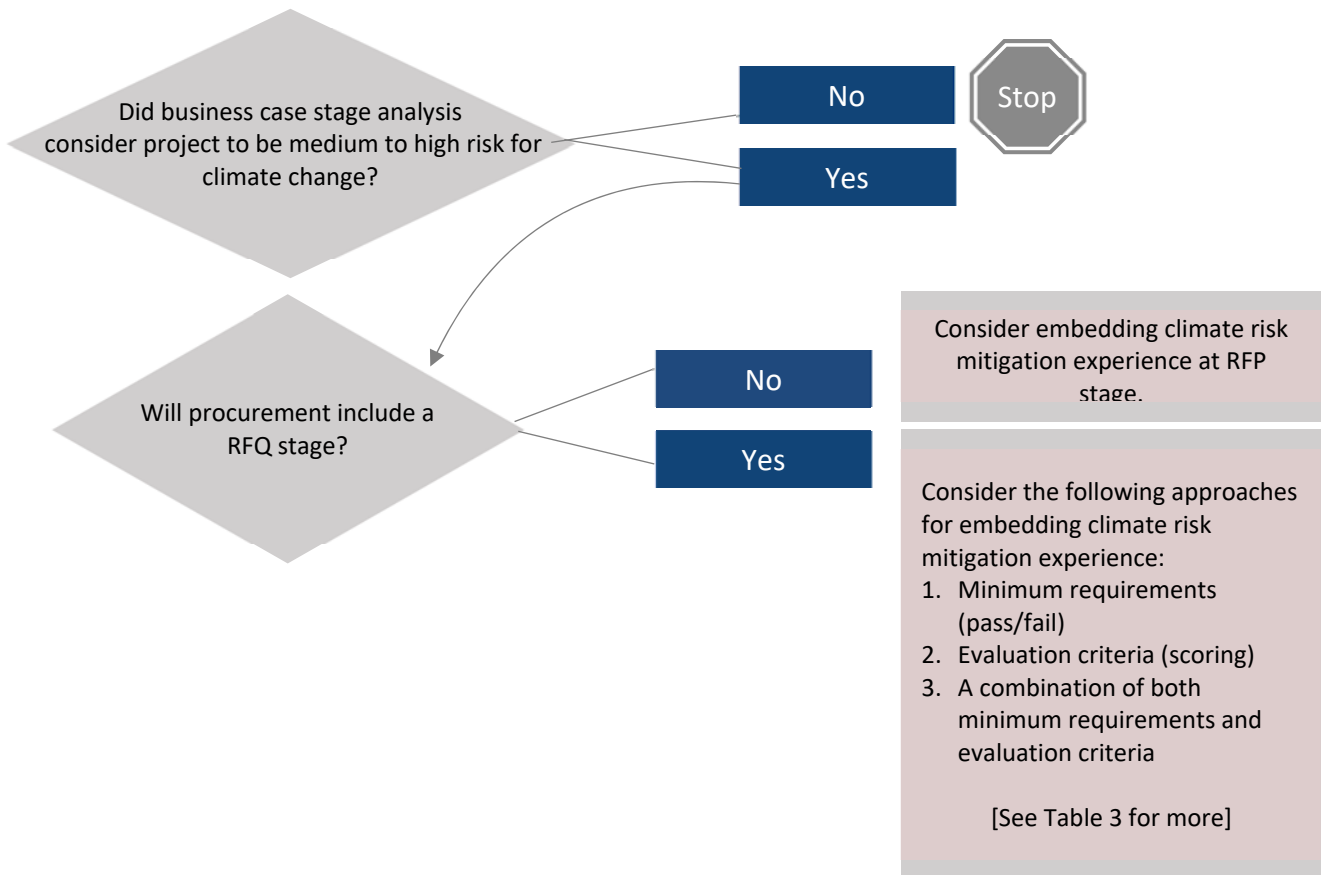
**Length of time to implement:** a few hours, to a couple days (a few conversations)

**Stakeholders involved:** Project Team; Enterprise Team; Advisors

**Expertise Required:** Technical expertise related to the project (e.g. power engineer, transport planner, etc); procurement and legal specialties

**Reference Materials:** <https://pppknowledgelab.org/guide/sections/70-qualifying-bidders>

## Framework: Deciding Whether and How to Embed Climate Resilience in the RFQ



**Note:** The ‘Request for Qualification’ (RFQ) stage centers on evaluating the proposers – understanding if they have relevant experience and capacity to deliver and manage the PPP. The ‘Request for Proposals’ (RFP) stage, which is the second phase in the evaluation process, centers on evaluating the proposals themselves – are the relevant documents there, and of sufficient quality?

Table 3: Approaches for Evaluating Project Proponent's Climate Resilience Experience in RFQ Stage

**APPROACH 1 MINIMUM REQUIREMENT**

<b>REQUIREMENT</b>	Respondent teams shall demonstrate sufficient experience managing projects with a similar climate risk profile.
<b>MEASUREMENT</b>	The evaluation of the qualifications will be based on the submittals received as required by Section [__x__] of this RFQ. Respondent teams shall submit all information in accordance with Section [__x__] of this RFQ. The Government, at its sole discretion, shall have the right to seek clarifications from each of the Respondents.
<b>SUBMISSION REQUIREMENT</b>	<p>Section [__x__]</p> <p>Provide completed submittal form [__y__] for reference projects. Each respondent team member shall identify a maximum of five Reference Projects as and to the extent required to furnish the reference project-related information.</p> <p>Based on the reference projects demonstrated to be most relevant to this subsection, describe the respondent team’s experience and capability with:</p> <ol style="list-style-type: none"> <li>1. ...</li> <li>2. ...</li> <li>3. ...</li> <li>4. managing projects with a similar climate risk profile;</li> <li>5. ...</li> </ol>

**APPROACH 2 EVALUATION**

<b>CRITERION</b>	<p>When evaluating responsive RFQ submittals, the following selection criteria will be considered with the accompanying weightings used to calculate an overall score:</p> <ol style="list-style-type: none"> <li>1. ...</li> <li>2. ...</li> <li>3. ...</li> <li>4. Extent of past experience with projects with a similar climate risk profile, as well as with the effective mitigation of climate risks in such projects (100 points)</li> <li>5. ...</li> </ol>
<b>MEASUREMENT</b>	The evaluation of the qualifications will be based on the submittals received as required by Section [__x__] of this RFQ. Respondent teams shall submit all information in accordance with Section [__x__] of this RFQ. The Government, at its sole discretion, shall have the right to seek clarifications from each of the Respondents.
<b>SUBMISSION REQUIREMENT</b>	Section [__x__]

Provide completed submittal form [\_\_y\_\_] for reference projects. Each respondent team member shall identify a maximum of five Reference Projects as and to the extent required to furnish the reference project-related information.

Based on the reference projects demonstrated to be most relevant to this subsection, describe the respondent team’s experience and capability with:

1. ...
2. ...
3. ...
4. managing projects with a similar climate risk profile;
5. ...

**APPROACH 3 EVALUATION AND MINIMUM PASS GRADE:**

<b>CRITERION / MINIMUM SCORE</b>	<p>When evaluating responsive RFQ submittals, the following selection criteria will be considered with the accompanying weightings used to calculate an overall score:</p> <ol style="list-style-type: none"> <li>1. ...</li> <li>2. ...</li> <li>3. ...</li> <li>4. Extent of past experience with projects with a similar climate risk profile, as well as with the effective mitigation of climate risks in such projects (100 points)</li> <li>5. ...</li> </ol> <p>Each RFQ submittal must achieve a score of at least 70% for each individual part of the submittal and associated sub criterion.</p>
<b>MEASUREMENT</b>	<p>The evaluation of the qualifications will be based on the submittals received as required by Section [__x__] of this RFQ. Respondent teams shall submit all information in accordance with Section [__x__] of this RFQ. The Government, at its sole discretion, shall have the right to seek clarifications from each of the Respondents.</p>
<b>SUBMISSION REQUIREMENT</b>	<p>Section [__x__]</p> <p>Provide completed submittal form [__y__] for reference projects. Each respondent team member shall identify a maximum of five Reference Projects as and to the extent required to furnish the reference project-related information.</p> <p>Based on the reference projects demonstrated to be most relevant to this subsection, describe the respondent team’s experience and capability with:</p> <ol style="list-style-type: none"> <li>1. ...</li> <li>2. ...</li> <li>3. ...</li> <li>4. managing projects with a similar climate risk profile;</li> <li>5. ...</li> </ol>



## 2.3.5 High-level decision framework for including climate resilience in RFP Stage

*This sub-section comes from the Climate Resilient Public Private Partnerships, Inter-American Development Bank, May 2020.*

PPPs are defined in terms of outputs. In such arrangements, GoJ does not prescribe how the private parties to the PPP project must achieve their outcomes related the project. This feature of the PPP can be useful to governments wishing to develop climate resilient infrastructure assets through PPP. In general, governments have two tools at their disposal:

1. Setting the PPP’s minimum requirements to achieve certain climate resilient aims, or
2. Embedding climate resilient considerations into the evaluation of bidding teams’ proposals.

The following framework provides guidance on how to think about the spectrum of how much discretion the Procuring Authority gives to the private sector in meeting climate resilience goals.

<p><b>When in PPP process to use:</b> when structuring the PPP contract.</p> <p><b>Length of time to implement:</b> as long as it would take to have a few discussions with key stakeholders</p> <p><b>Stakeholders involved:</b> Project Team; Enterprise Team; Advisors</p> <p><b>Expertise Required:</b> Technical expertise related to the project (e.g. power engineer, transport planner, etc); procurement and legal specialties</p>
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Table 4: Approaches for Incorporating Climate Resilience in RFP Stage

	Minimum requirements	Evaluation criteria	Evaluation and minimum pass grade
WHEN TO USE	If the Procuring Agency knows what it wants with regards to requirements vis a vis climate resilience, then using some sort of minimum requirements – either used as pass/fail criteria during the procurement or as requirements during the contract management stage – can be a way to achieve this.	If the Procuring Agency would like 1) bidders to differentiate themselves on climate resilience during the procurement and/or 2) the agency wants to confirm that it is comfortable with the approach the bidders are looking to follow.	If the procuring agency wants to offer flexibility to the bidders but does not feel that the public objective is important enough to affect the evaluation score.
REQUIRED FOR USE	Expertise on the Procuring Agency side to set the minimum requirements.	Capacity on the Procuring Agency side to evaluate the climate resilience proposals put forth by the bidders.	Capacity on the Procuring Agency side to evaluate the climate resilience proposals put forth by the bidders.

### 2.3.6 Considerations for requiring implementation of ‘Disaster Preparedness and Response plan’ by bidder

*This sub-section comes from the Climate Resilient Public Private Partnerships, Inter-American Development Bank, May 2020.*

A project-related emergency preparedness and response plan (EPR plan) can help manage the impacts of the occurrence risks, which were unable to be transferred or mitigated. This type of risk, for example the destruction inevitable in the wake of a Category 5 hurricane, is best managed through an EPR plan. When accepting bids for an infrastructure PPP project, the government may want to request bidders to develop, or jointly-develop with the government, an EPR as a way to ensure that there is some forethought on how to manage the possible eventuality of such a risk. This tool provides sample language that decision makers can use in requesting bidders to provide such plans. DBJ should also consider working with ODPEM to develop a standard EPR plan.

**When in PPP process to use:** when structuring the PPP contract.

**Length of time to implement:** as long as it would take to have a few discussions with key stakeholders

**Stakeholders involved:** Project Team; Enterprise Team; Advisors; Bidders; Climate Change Team; ODPEM

**Expertise Required:** Technical expertise related to the project (e.g. power engineer, transport planner, etc); procurement and legal specialties; outputs of Business Case Stage Analysis; ‘Disaster-Response’ and Climate Change expertise

**Examples:** The following provides an example of a an emergency response template for an airport:  
[http://www.airtap.umn.edu/publications/factsheets/documents/emergency\\_manual\\_template.pdf](http://www.airtap.umn.edu/publications/factsheets/documents/emergency_manual_template.pdf)

OPTION	DESCRIPTION	PROS	CONS	WHEN TO USE	DRAFT RFP LANGUAGE	DRAFT PPP AGREEMENT LANGUAGE
<b>1 BEFORE PROCUREMENT</b>	Government develops ERP plan and prescribes it to bidders	<ul style="list-style-type: none"> <li>Simple approach</li> <li>Uniformity of disaster response plans</li> <li>Low transaction costs</li> </ul>	<ul style="list-style-type: none"> <li>No creative contributions from bidders</li> </ul>	<ul style="list-style-type: none"> <li>Government has strong ERP plan</li> <li>Government wants uniformity of ERP plans</li> <li>Government does not want / need bidders to differentiate themselves on the development of ERP plans</li> </ul>	N / A	<p>The Developer shall implement the ERP Plan as per Appendix [__x__].</p> <p>Appendix [__x__] is developed by the Government.</p>
<b>2 DURING PROCUREMENT</b>	Government invites bidders to develop ERP plans and evaluates them	<ul style="list-style-type: none"> <li>Leverage private sector expertise and creativity</li> </ul>	<ul style="list-style-type: none"> <li>High transaction costs, both for public and private sector</li> </ul>	<ul style="list-style-type: none"> <li>Government believes that private sector can offer significant creativity</li> <li>Government wants bidders to differentiate themselves on the development of ERP plans</li> </ul>	As per below	<p>The Developer shall implement the ERP Plan as per Appendix [__x__].</p> <p>Appendix [__x__] is developed by the preferred bidder and lifted from the proposal into the execution version of the PPP Agreement..</p>
<b>3 AFTER PROCUREMENT</b>	Government requires bidders to develop an ERP plan after the selection of the preferred bidder.	<ul style="list-style-type: none"> <li>Leverage private sector expertise and creativity</li> <li>No additional transaction costs</li> </ul>	<ul style="list-style-type: none"> <li>No certainty about an ERP plan at the selection of the preferred bidder</li> </ul>	<ul style="list-style-type: none"> <li>Government has strong ERP plan</li> <li>Government does not need bidders to differentiate themselves on the development of disaster response plans</li> </ul>	N / A	<p>Prior to the Effective Date the Grantor and the Developer will jointly develop an ERP plan as per Clause [__x__].</p> <p>OR</p> <p>Within calendar 45 days of the Effective Date, the Developer shall provide for the Grantor's review and approval, which shall be neither unreasonably nor arbitrarily withheld, an ERP plan as per Clause [__x__].</p>

**Sample Language for the ‘Request for Proposals’ to include Disaster Preparedness and Response Plans**

Each Bidder is required to provide a complete Business Plan / Technical Proposal / Project Management Plan, including, but not limited to, the requested contents detailed in Schedule [\_\_x\_\_].

Schedule [\_\_x\_\_] Business Plan / Technical Proposal / Project Management Plan

Component	Description
...	...
...	...
...	...
<b>Disaster Preparedness Response Plan</b>	Demonstrate an effective disaster response approach that: <ul style="list-style-type: none"> <li>• builds on and is in accordance with the Office of Disaster Preparedness and Emergency Management plans, more specifically [__x__] and [__y__];</li> <li>• distinguishes between the construction phase and the operational phase; and</li> <li>• focuses on the climate risks that were identified as “high” and “medium” in [__the climate risk assessment dated [__z__] carried out by the Government__].</li> </ul>
...	...

**Sample Language for the PPP Agreement**

Prior to the Effective Date the Grantor and the Developer will jointly develop a disaster preparedness and response plan as per Clause [\_\_x\_\_].

OR

Within calendar 45 days of the Effective Date, the Developer shall provide for the Grantor’s review and approval, which shall be neither unreasonably nor arbitrarily withheld, a disaster preparedness and response plan as per Clause [\_\_x\_\_].

### 2.3.7 Embedding Climate Resilience into PPP evaluation

*This sub-section comes from the Climate Resilient Public Private Partnerships, Inter-American Development Bank, May 2020.*

PPP proposals are evaluated in accordance with the criteria set out in the Request for Proposals (RFP). As presented in this tool encouraging climate resilience actions through evaluation lends more discretion to the private party to the PPP in designing the solution.

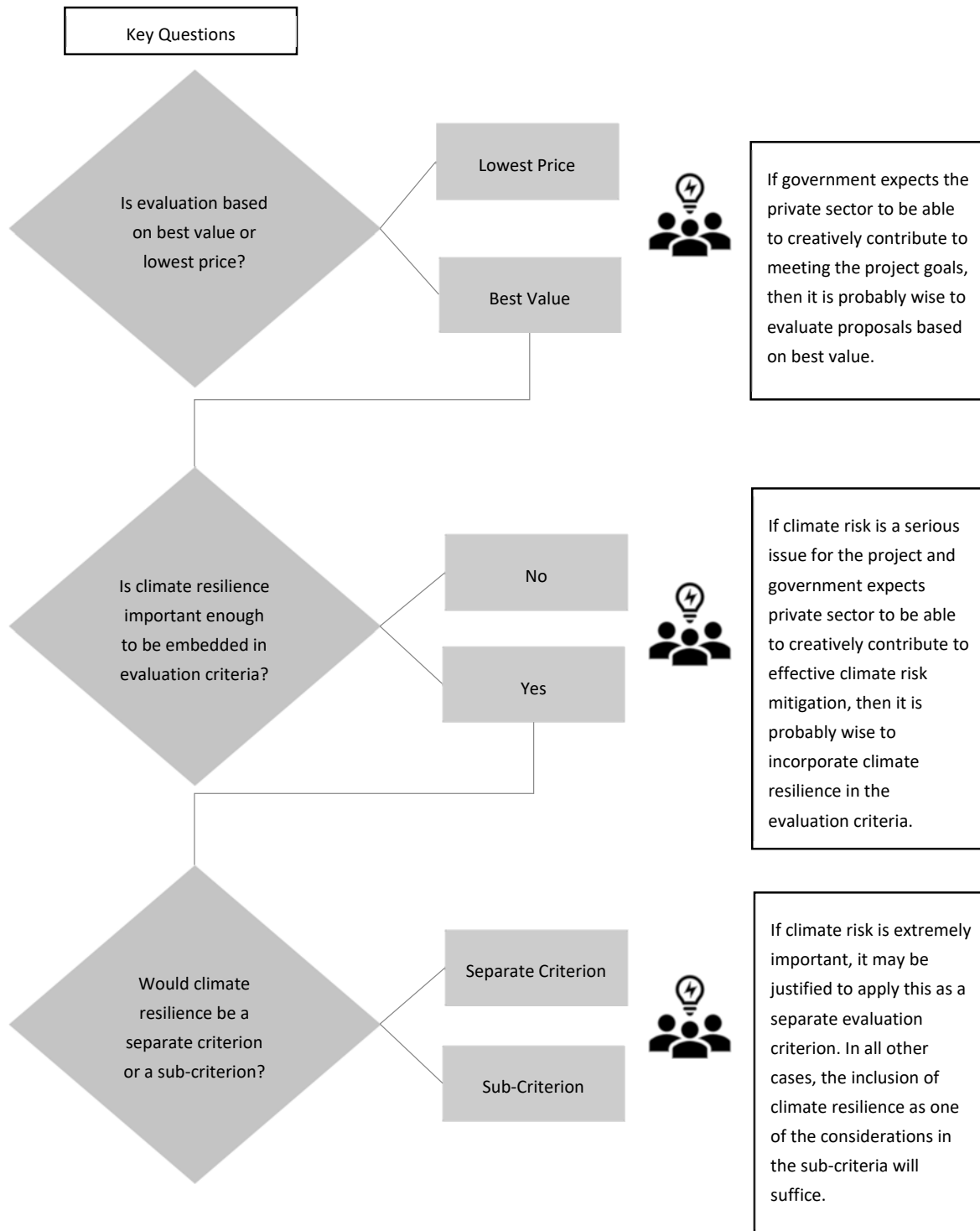
**When in PPP process to use:** when structuring the PPP contract.

**Length of time to implement:** as long as it would take to have a few discussions with key stakeholders

**Stakeholders involved:** Project Team; Enterprise Team; Advisors

**Expertise Required:** Understanding of government processes; Technical expertise related to the project (e.g. power engineer, transport planner, etc); procurement and legal specialties

**Examples:** For this tool, please see the 'mock' examples provided for guidance on how this could be implemented in practice. Also, see the '[Sofia Airport Tender Documentation](#)' - Bidders were required to submit an environmental and social program, which should include bidder's approach to the increase of the airport's use and production of renewable energy. Doing so can earn them extra points during evaluation.



### Example of Climate Resilience as a Separate Criterion

When requesting PPP project proposals in the ‘Request for Proposals’ (RFP), the Procuring Authority will list all necessary submission requirements (what documents are needed and in what format) as well as how the contents of the bid will be evaluated. Every criterion used to evaluate a bid will be explained in the RFP providing bidders with an understanding of what parts of their proposals will be evaluated and considered for scoring and what is needed to comply. In the evaluation process, it is possible for the government to evaluate project proposals based in part on the quality of their climate or disaster risk mitigation plans.<sup>14</sup> This table shows sample evaluation criteria, where climate resilience is listed as a *separate* criterion.

			WEIGHTING	
PRICE	50%	e.g. payment amount	50	
TECHNICAL	20%	CONSTRUCTION	• Quality and reliability of project design	8.5
			• Flexibility of construction term	6.0
			• Quality of assurance methods proposed	4.0
			• Etc.	1.5
	10%	OPERATIONS	• Quality + reliability of operating procedures and manuals	4.5
			• Commitment of means	3.0
			• Etc.	2.5
	10%	MAINTENANCE	• Quality of proposed maintenance methodology	10
			• Etc.	
	5%	ENVIRONMENT, SOCIAL	• Thoroughness of ESMP	5
		• Etc.		
5%	CLIMATE RESILIENCE	• Quality and realism of climate risk mitigation plan	5	
		• Etc.		
			Σ 100	

All evaluation criteria are reflected in the submission requirements for the project. Here is sample language as to how climate change could be reflected.

#### Sample RFP Language:

*The proponent will provide a climate risk mitigation plan, which at a minimum, details a proposed mitigation response to all the ‘critical’ climate risks identified by the Government of Jamaica during the project’s climate screening phase (found in report xx). Proponent may wish to provide varying responses according to different climate scenarios.*

<sup>14</sup> For more information on RFPs, please see: <https://ppp-certification.com/ppp-certification-guide/8-structuring-and-drafting-request-proposals-defining-proposal-requirements>

### Example of Climate Resilience as a Sub-Criterion

Another way to evaluate proponents’ proposals for their climate risk management consideration is by requiring proponents to discuss climate resilience in the various other technical reports required as part of the RFP package. This means that the parts of the submission that cover the construction, operations and maintenance plans would include discussion of climate resilience and how the proponent aims to address it. Submission requirements will clearly state what is expected in each of these reports and how it will be scored. The following shows indicative evaluation criteria, where climate resilience is a **sub-criterion**.

			WEIGHTING	
PRICE	50%	e.g. payment amount	50	
TECHNICAL	20%	CONSTRUCTION	Quality, reliability and <b>adaptability</b> of project design	8.5
			Flexibility of construction term	6.0
			Quality of assurance methods proposed	4.0
			Etc.	1.5
	15%	OPERATIONS	Quality and reliability of operating procedures and manuals; <b>evidence that procedures reflect consideration of climate related disruptions.</b>	4.5
			Commitment of means	3.0
			Etc.	2.5
	10%	MAINTENANCE	Quality and flexibility of proposed maintenance methodology; <b>responsiveness to occurrence of climate hazards</b>	10
			Etc.	
	5%	ENVIRONMENT, SOCIAL	Thoroughness of ESMP, evidence that climate change considerations are reflected in plan	5
			Σ 100	

When included as a sub-criterion, RFP should clearly state that various technical reports – e.g. O&M, Design – require discussion of climate resilience and how that will be evaluated.

#### SAMPLE RFP LANGUAGE:

*e.g., “The proponent’s ‘design functionality report’ shall address flexibility of the project to adapt to increased hazards associated with climate change.”*

*e.g., “The proponent’s operations and maintenance plan shall include how ceases in operations due to climate change hazards (e.g. hurricanes) will be addressed. It shall also include a proposed maintenance methodology, which takes into consideration climate change.”*

*e.g., “The proponent’s ‘Environment and Social Management Plan” shall include discussion of how the plan will respond in the event of a climate hazard that affects the project area.*



### 2.3.8 Sample language for PPP contract on requirement to periodically update climate risk mitigation plan

*This sub-section comes from the Climate Resilient Public Private Partnerships, Inter-American Development Bank, May 2020.*

If the procuring authority decides to require a Climate Risk Mitigation Plan as part of the bid submissions it may want to have the bidders update these plans periodically to consider latest, most up to date climate data. In drafting the PPP contract, the procuring authority could thus include a requirement that the private party submit a new 'Climate Risk Mitigation Plan' every 3-5 years.

**When in PPP process to use:** use when structuring the PPP contract.

**Length of time to implement:** as long as it would take to have a few discussions with key stakeholders

**Stakeholders involved:** Project Team; Enterprise Team; Advisors; Climate Change Team

**Expertise Required:** Understanding of government processes; Technical expertise related to the project (e.g. power engineer, transport planner, etc); procurement and legal specialties

**Reference Materials:** *Climate Risks and Resilience in Infrastructure PPPs: Issues to be Considered*, PPIAF, March 2016 [[file:///Users/home/Downloads/PPIAF\\_ClimateResilience\\_IssueBrief.pdf](file:///Users/home/Downloads/PPIAF_ClimateResilience_IssueBrief.pdf)]

### Sample language to include requirement for periodically updated climate risk mitigation plans as part of PPP agreement

Include in the PPP Contract:

*Every [insert #, or range of #s] years the private party is required to update its Climate Risk Mitigation Plan, such that it considers the most up to date climate data available for the project area.*

## 2.3.9 Force Majeure considerations

The following three sections pulls from the report: *Force Majeure in Climate Resilient PPPs: Customization of the Government of Jamaica's Standard Force Majeure Clause in PPP Contracts and Inclusion of Climate Risk Mitigation in PPP procurements* (DRAFT 2021, Rebel).

The following section provides an overview of considerations the Government of Jamaica may want to make with regards to how it defines Force Majeure in the PPP contract with regards to what risks are included in the force majeure definition (662.3.9.1), how to think about continuation of payment – either from the Owner to Developer or vice versa – in the context of different force majeure events (2.3.9.2), and considerations for offering compensation to the Developer in the case of damages (2.3.9.3).

### 2.3.9.1 Force Majeure: Updating the Definition

While initial research conducted as part of the report: *Force Majeure in Climate Resilient PPPs: Customization of the Government of Jamaica's Standard Force Majeure Clause in PPP Contracts and Inclusion of Climate Risk Mitigation in PPP procurements* (2021, Rebel) did not yield any examples of force majeure clauses that are customized to local climate risks this may be something worth considering.

If the results of the climate risk assessment performed during the Business Case Stage identified any climate risks that have a *high* likelihood of occurrence, the procurement team should work together with climate change experts and legal team to determine if:

- 1) any of these events can be excluded from the definition of Force Majeure and/or
- 2) any of these events can only be included if they are qualified, that is included if they occur to a certain degree (for example, if rainfall exceeds a certain minimum threshold).

Table 2 shows the Government of Jamaica's current draft, standard FM clause, highlighting sections that could be further customized....

Table 2: Government of Jamaica Draft Standard Force Majeure Clause

<b>GOJ's Draft Standard Force Majeure Clause (June 2021)</b>
<p>Any Party being unable to perform an obligation under the Agreement in whole or in part, due to a Force Majeure Event shall be referred to as the "Affected Party".</p> <p>A Force Majeure Event means an event or circumstance, or a combination of events and circumstances beyond the Affected Party's reasonable control (direct or indirect), that occurs in, or directly affects Jamaica or the Project, which was unanticipated or unforeseeable, or if anticipated or foreseeable, could not have been prevented, avoided or overcome by the Affected Party acting in accordance with good industry practice and having taken all reasonable precautions or alternative measures to avoid the effect of said event or overcome it, is not the direct result of a breach by the Affected Party of this Agreement and renders the obligation of the Affected Party impossible to perform. Force Majeure Events include but are not limited to the following events or circumstances provided that, they meet all the criteria set out in the definition above:</p> <ol style="list-style-type: none"><li>a) Acts of God, such as lightning, fire, earthquake, volcanic eruption, hurricane, tsunami, flood, drought, storm or other unusually severe or abnormal weather conditions or natural disasters,</li><li>b) war, invasion, blockade, international embargo, armed conflict or act of foreign enemy;</li><li>c) revolution, riot, insurrection or other civil commotion, act of terrorism or sabotage, including any action taken by governmental authorities to oppose, combat or defend themselves or the public at large against any such act;</li><li>d) explosion, radioactive, biological or chemical contamination or ionizing radiation;</li><li>e) strikes, work to rule, go slows and/or lockouts which are in each case either nationwide or affect the entire parish of [xxxx] or are of a political nature which continue for a period of more than [ xxxx] days, but</li></ol>

not including labour employed by the Affected Party, its Subcontractors or its suppliers or any industrial dispute which is specific to the performance of this agreement;

- f) pressure waves caused by devices travelling at sonic or supersonic speeds;
- g) epidemic, pandemic (as declared or classified by the World Health Organization or its successor in title), famine, disease or plague,

but for the avoidance of doubt, does not include economic hardship of the Affected Party, change in market conditions, or any intentional action or inaction, errors or omissions, failure to comply with applicable laws or a breach of the Agreement caused or materially contributed to by the Affected Party.

The Parties shall, and procure all its subcontractors to, take all reasonable steps within their power and flowing from their obligations under this agreement to mitigate the effects of Force Majeure Events and particularly, in anticipation of flooding, tropical storms, hurricanes, earthquakes or any natural disaster prone to occurring in Jamaica and the Caribbean.

To obtain relief under this provision, the Affected Party shall, as soon as practicable and in any event, within [xxxx] days of the occurrence of the Force Majeure Event, give written notice to the other Party stating:

- a) the relief being sought;
- b) the nature of the Force Majeure Event in sufficient detail;
- c) the date of initial occurrence (and if on-going the period for which it has continued) and its anticipated duration;
- d) that the Force Majeure Event caused the need for relief claimed;
- e) that no steps could have been taken by the Affected Party to prevent, avoid or overcome the occurrence of the Force Majeure Event or its consequences by the Affected Party and its contractors acting reasonably and in accordance with good industry practice, including recourse to alternative sources of services, equipment and materials;
- f) the reasonable actions being taken in accordance with good industry practice, to minimize the effect of the Force Majeure Event and prevent, avoid or overcome further damage including recourse to alternative sources of services, equipment and materials and
- g) that the Affected Party is endeavouring to perform its obligations under the Agreement.

The Affected Party shall provide the other Party with regular updates of the foregoing information and satisfy reasonable inquiries by the other Party in relation to the Force Majeure Event, until the Force Majeure Event ceases or the Parties otherwise agree.

The Affected Party shall obtain relief to the extent that the other Party is satisfied that:

- a) the Affected Party and its contractors could not have avoided such occurrence or consequence by good industry practice which might reasonably be expected to have taken, without incurring material costs;
- b) the Force Majeure Event caused the need for the relief claimed;
- c) the relief claimed could not reasonably be expected to be mitigated by the Affected Party acting in accordance with good industry practices, including recourse to alternative sources of services, equipment and materials, without incurring material cost; and
- d) the Affected Party is endeavouring to perform its obligations under the Agreement.

If the Affected Party has complied with its obligations set out above, then the Affected Party shall be excused without damages or liquidated damages from the performance of its obligations under the Agreement to the extent to which it has been prevented or delayed by reason of the Force Majeure Event.

If the Force Majeure Event prevents the Affected Party from fulfilling its obligations in relation to works, the Affected Party shall be entitled to an extension of time subject to and in accordance with the terms of this Agreement. Any suspension of performance shall be of no greater scope and of no longer duration than is reasonably required to prevent or ameliorate the significant and detrimental effects of the Force Majeure Event.

[👉 The above two clauses indicate that the Government of Jamaica would consider offering schedule and performance relief, though not "cost relief" in the event of Force Majeure. For considerations on changing this clause to include "cost relief" please see **2.3.9.3 Force Majeure: Compensation in Case of Damages** .

Notwithstanding any other provision of this Agreement, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Agreement, unless the Parties otherwise agree.

[👉 The above clause indicates that anticipated payments would continue to be made during Force Majeure Events without any adjustment. See **Section 2.3.9.2 Force Majeure: Continuation of Payment** for considerations on whether to keep clause as is.]

If the Parties cannot agree as to the extent of the relief required or that a Force Majeure Event has occurred, the Parties shall resolve the matter in accordance with Clause [Dispute Resolution].

If a Force Majeure Event has occurred and is continuing for [xxxx] days, and has prevented and is continuing to prevent the Affected Party from performing all or substantially all of its obligations under the Agreement, then either Party may terminate this Agreement by notice in writing in accordance with Clause [Termination]. If this Agreement is terminated as a result of this Clause [xxxx] the Affected Party shall be entitled to compensation in accordance with Clause [Termination Payment] as applicable and shall not be entitled to any further compensation.

### 2.3.9.2 Force Majeure: Continuation of Payment

In Jamaica, under the proposed standard Force Majeure clause (see Table 2: Government of Jamaica Draft Standard Force Majeure Clause), the Owner (MDA) would be required to continue meeting any payment obligations to the Developer (and vice versa, if applicable) in the case of Force Majeure, unless the Parties agree otherwise. There is potential for customization of this approach under both revenue-based and availability payment PPP contracts. The following pulls from the report: *Force Majeure in Climate Resilient PPPs: Customization of the Government of Jamaica’s Standard Force Majeure Clause in PPP Contracts and Inclusion of Climate Risk Mitigation in PPP procurements* (DRAFT 2021, Rebel). It walks through the different considerations for Revenue and Availability Payment PPP contracts and then proposes how these considerations may influence how the force majeure clause is customize for a particular project.

#### 2.3.9.2.1 Revenue based PPP contracts:

Some revenue based PPP contracts include an upfront payment from the Owner to the developer or vice versa, and some include an on-going payment from one party to the other (for example an operating subsidy, revenue guarantee payment or a revenue share payment). Impact of force majeure events on these payment types differs. An overview of this differing treatment is outlined in Table 3.

Table 3: Considerations for Continuation of Payment in Event of Force Majeure for Revenue-based PPPs

Payment type	When used	Implications of a FM event on this type of payment
<b>Upfront Payment</b>	<p>Such payments</p> <ul style="list-style-type: none"> <li>Flow from Owner (e.g., MDA) to developer when project requires subsidy.</li> <li>Flow from Developer to Owner (e.g., MDA) to developer when project is expected to generate a surplus (i.e., Developer willing to pay Owner for right to operate the project and collect revenues)</li> </ul>	<ul style="list-style-type: none"> <li>Less/unlikely affected by FM event, as payment will likely be made prior to FM event.</li> <li>In case where FM event occurs prior to payment, payment amount will need to be revised.</li> </ul>
<b>Ongoing Payment</b>	<ul style="list-style-type: none"> <li>Either fixed payments or contingent (meaning something will trigger payment, e.g., toll revenues below a certain level).</li> </ul>	<ul style="list-style-type: none"> <li>For those ongoing payments flowing from Owner (e.g., MDA) to Developer – <ul style="list-style-type: none"> <li>Where they support project’s viability, continue payment</li> <li>Where paid only to offset costs that are no longer relevant in aftermath of FM, reconsider payment</li> </ul> </li> </ul>

#### 2.3.9.2.2 Availability Payment PPPs:

Under an availability payment PPP structure, the Developer is paid periodic payments as compensation for the investments and ongoing maintenance and operations of a facility/asset. The cash flows of availability payment

PPP projects tend to be very predictable, especially when compared to revenue-based PPP projects.<sup>15</sup> In the case of a Force Majeure Event, a Developer may be excused from performance. The question is whether an Owner should continue to pay (part of) the availability payment in the case of a Force Majeure Event. In this context, a distinction between insurable and uninsurable Force Majeure Events can be helpful.<sup>16</sup> These distinctions are outlined below in Table 4.

Table 4: Treatment of Insurable vs Non-insurable Force Majeure Events in Availability Payment PPPs

Type of FM Event	Treatment in case of FM event	Decision and Financial Impacts on Owner (e.g., MDA)	Ways to pre-emptively plan for such events
<b>Insurable</b>	<ul style="list-style-type: none"> <li>For these events developer required to have insurance.</li> <li>Insurance will cover all or some of the Developer's cost, which will typically include debt service.</li> </ul>	<ul style="list-style-type: none"> <li>Impact: ●</li> <li>No need to continue to pay availability payments because Developer receives pay out from its insurance.</li> </ul>	<ol style="list-style-type: none"> <li>1. Conduct detailed project-specific insurability analysis</li> </ol>
<b>Uninsurable (full stop)</b>	<ul style="list-style-type: none"> <li>Event is uninsurable so Developer will <b>NOT</b> receive insurance payout for such FM events.</li> <li>Owner may want to consider providing continuation of the availability payments for the duration of the Force Majeure Event.</li> </ul>	<ul style="list-style-type: none"> <li>Impact: ●●●</li> <li>Owner must decide whether to make provisions for continuing availability payments for such FM events. Not continuing availability payments for such FM events may lead to higher bids from developers/make project "unbankable" because Developers and their financiers will need to factor and price in the risk of not receiving availability payments.</li> </ul>	<ol style="list-style-type: none"> <li>1. Conduct detailed project-specific insurability analysis</li> <li>2. If continuation of availability payments (AP) is desirable: <ol style="list-style-type: none"> <li>a. Determine: Pay all or part?</li> <li>b. Consider: Paying <i>only the debt service portion</i> protects debt financiers and helps improve financing conditions BUT does not protect the Developer and subcontractors.</li> <li>c. Consider: Paying <i>full</i> APs provides most comprehensive protection for financiers, Developer, and subcontractors and, ceteris paribus, leads to the lowest bids.</li> </ol> </li> </ol>
<b>Uninsurable (due to prohibitively high cost of insurance)</b>	<ul style="list-style-type: none"> <li>Owner may want to consider providing continuation of the availability payments for the duration of the Force Majeure Event.</li> </ul>	<ul style="list-style-type: none"> <li>Impact: ●●●</li> <li>Requiring a Developer to get unattractively priced insurance would lead to higher bids and lower value-for-money for the Owner.</li> </ul>	<ol style="list-style-type: none"> <li>3. If project agreement will does not allow payment of AP during FM, consider allowing alternative ways for Developer to earn back investment to ensure bankability, e.g. by allowing Developer to make up missed APs at a later stage.</li> </ol>

<sup>15</sup> Force Majeure in Climate Resilient PPPs: Customization of the Government of Jamaica's Standard Force Majeure Clause in PPP Contracts and Inclusion of Climate Risk Mitigation in PPP procurements. 2021 p10

<sup>16</sup> ibid

### 2.3.9.2.3 Organizing to customize “continuation of payment” within Force Majeure Clause for climate-related Force Majeure Events

Table 5 lays out steps to take when going about customizing the PPP contract’s force majeure clause with regards to “continuation of payment” in the event of a climate-related force majeure event. It would be helpful to work through these steps with a group comprised of climate, procurement, and legal expertise.

Table 5: High-level Steps for Customization of Force Majeure with regards to continuation of payment<sup>17</sup>

<ol style="list-style-type: none"><li>1) Identify relevant climate-related Force Majeure Events that may occur during operating period through risk workshop.</li><li>2) Confirm availability and reasonableness of pricing of insurance for identified Force Majeure Events.</li><li>3) Based on the general risk allocation framework<sup>18</sup> and considering the availability and reasonableness of insurance pricing and its impact on value for money, determine whether to require Developer to insure against identified Force Majeure Events and specify coverage requirements.</li><li>4) For revenue-based PPP projects, determine to what extent payment between parties (e.g., ongoing contingent subsidies from the Owner to the Developer, or revenue sharing and lease payments from the Developer to the Owner) should continue to be paid in case of a Force Majeure Event, considering the business case implications such payments may have.</li><li>5) For uninsured Force Majeure Events in availability payment PPP projects, determine to what extent the availability payment will continue to be paid in case an uninsured Force Majeure Event leads to unavailability (e.g., full availability payment minus avoided costs or only the debt service portion of the availability payment).</li></ol>
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### 2.3.9.2.4 Customizing language regarding “continuation of payment” within Force Majeure Clause for climate-related Force Majeure Events

Jamaica’s draft standard Force Majeure clause (see Table 2 of this document) contains the following language related to continuation of payment:

*Notwithstanding any other provision of this Agreement, Force Majeure shall not apply to obligations of either Party to make payments to the other Party under the Agreement, unless the Parties otherwise agree.*

The above clause indicates that anticipated payments would continue to be made during Force Majeure Events without adjustment. Based on considerations highlighted in Sections 2.3.9.2.1 and 2.3.9.2.2 project teams may wish to modify this clause. Considerations for modification of language differ and hence modifications will differ based on whether it is a revenue-based PPP or an availability payment PPP. See Table 6: Considerations for Modifying Language for Continuation of Payment for Force Majeure Clause.

<sup>17</sup> *Force Majeure in Climate Resilient PPPs: Customization of the Government of Jamaica’s Standard Force Majeure Clause in PPP Contracts and Inclusion of Climate Risk Mitigation in PPP procurements.* 2021 p11

<sup>18</sup> Firstly, a risk should be allocated to the party best able to control the likelihood of the risk occurring. Secondly, a risk should be allocated to the party best able to control the impact of the risk on project outcomes. Thirdly, a risk should be allocated to a party best able to absorb the risk at the lowest cost if the likelihood and impact cannot be controlled.

Table 6: Considerations for Modifying Language for Continuation of Payment for Force Majeure Clause for Climate Risk Events

Type of PPP	Modifications
<p><b>Revenue-based</b></p>	<p>Payments from Owner to Developer:</p> <ul style="list-style-type: none"> <li>• If ongoing payments are anticipated, continue such payments during Force Majeure Event if they are necessary for project’s financial viability. However, if such payments are no longer necessary for the financial viability of the project (for example because the Developer’s operating costs are lower during the Force Majeure Event due to reduced operations) and/or if these payments were intended to offset costs that are no longer being incurred by the Developer, these payments should be adjusted accordingly.</li> </ul> <p>Payments from Developer to Owner:</p> <ul style="list-style-type: none"> <li>• If ongoing payments are anticipated, e.g., revenue sharing or lease payments, such payments should likely be paused during a Force Majeure Event if the project is no longer generating (sufficient) revenue, if continuation of (full) payment would likely threaten the financial viability of the Developer.</li> </ul>
<p><b>Availability Payment</b></p>	<ul style="list-style-type: none"> <li>• Under Force Majeure for an availability payment PPP, the Owner should continue to pay availability payments. However, such payments could potentially be reduced for avoided cost or reduced to cover debt service only.</li> <li>• If the Owner is unwilling or unable to commit to continuing to pay availability payments during Force Majeure, the Developer should be given the opportunity to earn back its investment through some other mechanism, for example by giving the Developer an opportunity to catch up on missed availability payments at a later stage (i.e., a deferral of missed availability payments, for example by automatically extending the concession period).</li> <li>• The termination payment for Extended Force Majeure termination payment must be structured and sized to fairly compensate Developer for any missed past and future availability payments.</li> </ul>



### 2.3.9.3 Force Majeure: Compensation in Case of Damages

***[This section provides guidance in relation to Jamaica’s standard clause as of June 2021. If the standard clause is updated then some of this discussion may become moot. ]***

*The following pulls from the report: Force Majeure in Climate Resilient PPPs: Customization of the Government of Jamaica’s Standard Force Majeure Clause in PPP Contracts and Inclusion of Climate Risk Mitigation in PPP procurements (DRAFT 2021, Rebel).*

Under Government of Jamaica’s proposed standard Force Majeure clause (see Table 2), in the case of Force Majeure the Developer would only be entitled to performance and schedule relief, and not cost relief.

(Climate-related) Force Majeure Events may cause severe physical damage that requires repair/replacement, as well as delays that result in additional financial and other costs. Jamaica’s standard clause, as currently written, would require the Developer to cover these additional incremental costs. Under most PPP contracts, the Developer may alternatively choose to terminate the contract after a certain period if it is not able or willing to cover the additional costs.

#### **Types of Relief in PPP contracts**

- **Performance Relief:** Developer not penalized for not meeting performance requirements.
- **Schedule Relief:** Developer afforded extra time to meet certain milestones.
- **Cost Relief:** Could either be “cost” compensation, which is when private party is compensated for extra costs or “delay/financing” compensation, which is when private party compensated for extra financing costs.
- **Termination Right:** private party has right to terminate contract.

#### 2.3.9.3.1 Considering cost compensation – insurable vs non-insurable events

Whether the Government of Jamaica will need or want to provide some form of cost relief to a Developer in the event of a (climate-related) Force Majeure Event will likely depend on whether the event is insurable.

**Insurable:** For insurable Force Majeure Events, a Developer would be expected to take out insurance. Depending on the coverage and sublimits of the individually insured perils, this insurance can cover: i/all or some of the Developer’s cost to reinstate the asset, ii/the incremental costs associated with potential delays (including financing costs). In such cases, there is no need for the Owner to pay the Developer provided the full loss limit or applicable sublimits exceed the anticipated reinstatement costs and if insurance companies are willing and able to offer insurance at reasonable terms. If not, the Owner may want to retain that particular risk and instead treat the Force Majeure Event as uninsurable, as this may lead to better value-for-money for the owner.

**Uninsurable:** If the Force Majeure Event is uninsurable or to the extent that the required insurance policy’s full loss limit or applicable sublimits are insufficient to cover the incurred damage, the Owner needs to determine whether it wants to pay the Developer for the (uninsured portion of the) damage and associated costs.

Table 7: Impact of Cost Compensation on Owner, Insurable and Non-insurable events

Type of FM Event	Expectation of Developer	Cost Compensation Impact on Owner
<b>Insurable</b>	Take out insurance for those potential FM risks	No financial impact in case of insurable FM event materializing, as insurance will cover
<b>Non-insurable/Cost of Insurance too high</b>	Seek to share risk with Owner	Will need to determine whether to pay Developer for uninsurable risks. If not, could lead to higher bid prices/less value for money.

### 2.3.9.3.2 Compensating for extra costs and delays associated with Force Majeure events

The types of compensation and considerations are the same for both Revenue-based PPPs and Availability Payment PPPs.

Type of PPP	Compensation Possibilities	Considerations
<b>Revenue</b>	<ul style="list-style-type: none"> <li>Directly reimbursing some or all costs incurred.</li> <li>Giving Developer other ways to earn back the additional investment, e.g., by extending the term of the PPP contract and/or allowing the Developer to charge higher rates (for example, in the case of a toll concession).</li> <li>Not providing compensation</li> </ul>	<ul style="list-style-type: none"> <li>How much to compensate? Solely direct costs? Indirect costs? Financing costs? All costs?</li> <li>Note – likely a relationship between compensation to be provided and bid prices. All things being equal, more generous compensation = lower bid prices.</li> </ul>
<b>Availability</b>	<ul style="list-style-type: none"> <li>Directly reimbursing some or all costs incurred.</li> <li>Giving Developer other ways to earn back the additional investment, e.g., by extending the term of the PPP contract and/or allowing the Developer to charge higher rates (for example, in the case of a toll concession).</li> </ul> <p><b>*Generally in these types of PPPs, compensation is provided.</b></p>	<ul style="list-style-type: none"> <li>How much to compensate? Solely direct costs? Indirect costs? All costs?</li> <li>Note – likely a relationship between compensation to be provided and bid prices. All things being equal, more generous compensation = lower bid prices.</li> </ul>

### 2.3.9.3.3 Options for reinstating asset after Force Majeure Event

There may be cases where an owner may not want to rebuild a project after disaster strikes, these could include:

- Asset is near end of useful life
- Owner no longer needs asset

Further, there could also be situations where damage caused by a Force Majeure Event provides an opportunity to build the asset back in a way that better meets the Owner's evolving needs.

Given this, it is advisable that the Owner carefully analyse whether it wants to keep the asset prior to paying to have an asset reinstated. If the Owner concludes that reinstating the asset does not make sense, then it can terminate the project through Extended Force Majeure clause. The Extended Force Majeure clause typically provides both the Owner and the Developer the opportunity to terminate the project if the Force Majeure Event causes the Developer and/or the Owner to be unable to perform their respective obligations for an extended period of time. In that case, the Owner will typically compensate the Developer, following the termination compensation formula outlined in the PPP contract.

If the Owner instead decides to have the Developer rebuild the asset but with changes to ensure the project continues to meet the Owner's needs, the Owner will also have to compensate the Developer for any incremental costs associated with those changes.

#### 2.3.9.3.4 Organizing to customize language for compensation in case of Force Majeure Event

As discussed above, providing compensation the case of Force Majeure events depends on several factors including whether the damage resulting from the Force Majeure Event is significant, whether the type of Force Majeure risk is insurable and whether the PPP is Availability Payment or Revenue based. Table 8 provides steps for customizing the Force Majeure clause with regards to compensation in case of damages.

Table 8: High-level Steps for Customization of Force Majeure with regards to Compensation in case of damages

1. Identify relevant climate-related Force Majeure Events that can lead to substantial damage, either during construction or operations, through risk workshop.
2. Confirm availability and reasonableness of pricing of insurance for identified Force Majeure Events.
3. Based on the general risk allocation framework<sup>19</sup> and considering the availability and reasonableness of insurance pricing and its impact on value for money, determine whether to require Developer to insure against identified Force Majeure Events and specify coverage requirements.
4. Revenue-based PPP projects: For damage associated with uninsurable Force Majeure Events or to the extent that the required insurance policy's full loss limit or applicable sublimits are insufficient to cover the incurred damage, determine whether to provide compensation or other types of accommodation (e.g., concession extension), if any.
5. Availability payment PPP projects: For damage associated with uninsurable Force Majeure Events (or to the extent that the required insurance policy's full loss limit or applicable sublimits are insufficient to cover the incurred damage), determine whether: 1) the Owner is willing to commit upfront to funding any uninsured damages (only if reinstatement is desirable, see below) or 2) instead relies on a voluntary change order process to address damages that may be caused by an uninsurable Force Majeure Events. The latter may be more attractive for agencies that want to avoid an automatic potential liability in case an uninsurable Force Majeure Events occurs.
6. Define process to determine whether reinstatement after significant damage due to a Force Majeure Event is desirable and whether any design changes should be contemplated.

#### 2.3.9.3.5 Customizing language regarding compensation in case of damages in Force Majeure

Jamaica's (current as of June 2021, see Table 2) standard Force Majeure clause contains the following language related to performance and schedule relief:

*If the Affected Party has complied with its obligations set out above, then the Affected Party shall be excused without damages or liquidated damages from the performance of its obligations under the Agreement to the extent to which it has been prevented or delayed by reason of the Force Majeure Event.*

*If the Force Majeure Event prevents the Affected Party from fulfilling its obligations in relation to works, the Affected Party shall be entitled to an extension of time subject to and in accordance with the terms of this Agreement. Any suspension of performance shall be of no greater scope and of no longer duration than is reasonably required to prevent or ameliorate the significant and detrimental effects of the Force Majeure Event.*

To incorporate the ideas discussed above, we propose adding a cost relief clause that would convey the following key messages:

- Insurance proceeds would first be applied towards the cost of reinstatement. Any cost relief would be net of insurance proceeds.
- To the extent that 1) the Developer has maintained the insurance coverage requirements as outlined in the Project Agreement and 2) the required coverage is insufficient to cover the damages caused by a Force Majeure Event, the Owner will either provide cost relief to the Developer (availability payment P3 and revenue-based PPP without concession term extension) to reinstate the asset or extend the concession term for the Developer so that the Developer can earn a reasonable return on its additional investment associated with the reinstatement work. If the Owner cannot commit to providing relief (for example because the Owner prefers to use a voluntary change order process to address any Force Majeure related damages to avoid automatically incurring additional liabilities), the Developer will not be required to reinstate the asset until such relief is provided.
- Cost relief may cover direct costs, direct and indirect costs, or direct, indirect, and financing cost.
- To avoid rebuilding an asset that may no longer satisfy the Owner's needs, the Owner would be required to confirm its desire to reinstate the asset and outline any design changes it would like to see implemented before requesting the Developer to reinstate the asset.

## 2.4 Contract Management

During the contract management stage, the MDA/GoJ must ensure that any promises agreed in the PPP contract are delivered and that new events or changes in general – and specifically changes to the climate risk profile – are responded to efficiently and adequately; without disrupting the project.

As regards climate resilience considerations, this stage will require tracking any climate-related commitments agreements set during the Transaction Stage and managing any unforeseen climate-related risks that occur. For those projects deemed to have medium to high-climate related risks it is wise to include climate change expertise as part of the contract management team and to have the person/or people with that expertise track and follow all contractual obligations (e.g., requirements related to updating climate risk mitigation plans, or updates related to disaster preparedness and risk management plans).

While resource and expertise found from across the Government of Jamaica is continually evolving, some of the following entities may be able to offer expert view on climate related project aspects not only during the project's development phase but also during its implementation (i.e. during contract management)<sup>20</sup>:

- Planning Institute of Jamaica (PIOJ)
- Ministry of Housing, Urban Renewal, Environment and Climate Change (MHURECC)
- University of West Indies (UWI)
- Office of Disaster Preparedness and Emergency Management (ODPEM)

### **Reference Materials:**

*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/>*

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<sup>20</sup> As of June 2021

## 2.4.1 Climate considerations in contract management<sup>21</sup>

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.

There are four key aspects of putting contract management in practice: establishing the contract management structure; monitoring and managing PPP delivery; dealing with change and managing contract expiry. These aspects and relevant climate considerations for each aspect are detailed in Figure 1.

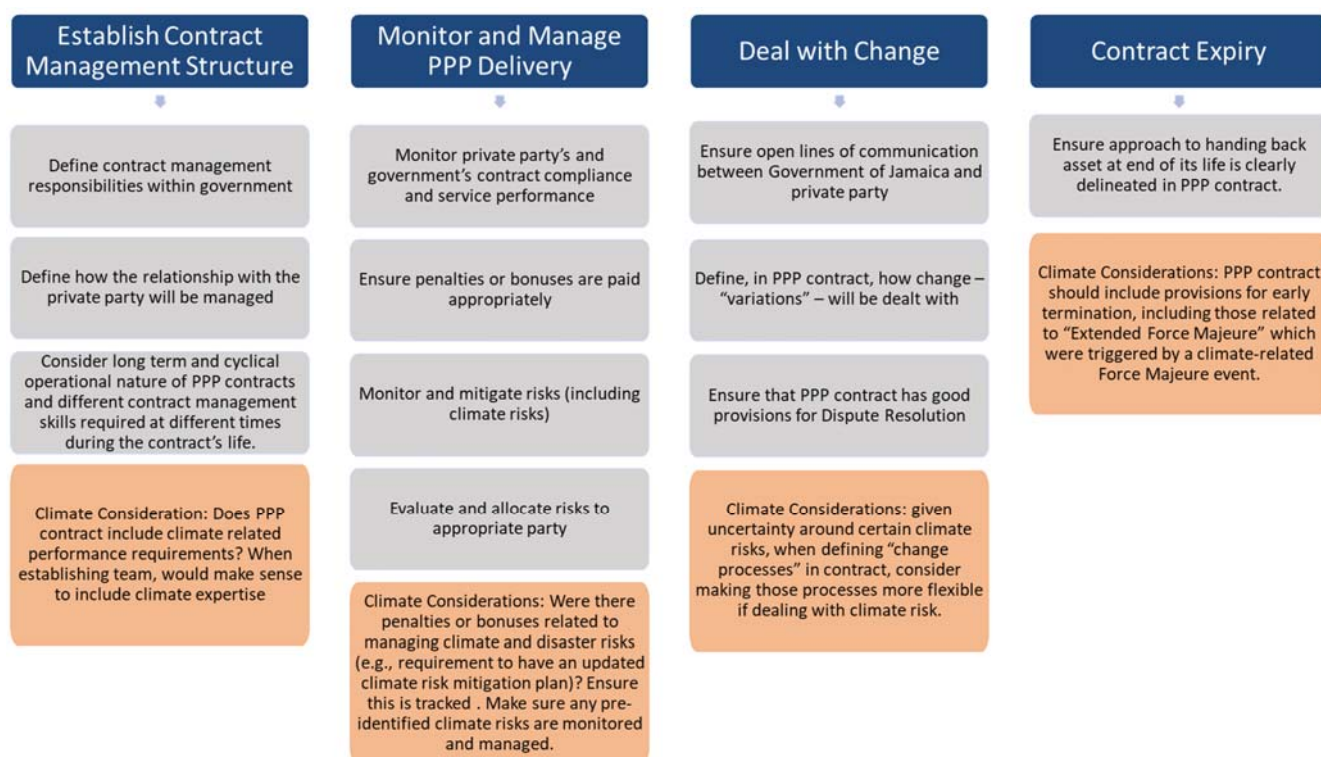


Figure 1: Key aspects to managing the PPP Contract, including climate considerations

<sup>21</sup> Please see "Managing PPP Contracts": <https://pppknowledgelab.org/guide/sections/73-managing-ppp-contracts>

## 2.4.2 Enforcing climate resilience through the PPP payment mechanism

The PPP's payment mechanism defines how the private party will be remunerated. Providing bonuses or penalties to the payment, serves as an important lever to incentivize certain actions like promoting climate resilience by the private party and efficient risk allocation in the contract. The basic elements of PPP payment mechanisms can include user charges, government payments, and/or bonuses, penalties or fines.<sup>22</sup>

A PPP payment mechanism could include some or all these elements, which should be fully defined in the contract—including specifying the timing and mechanism for making the payments in practice. The following provides guidance on how the payment mechanism can help incentivize the private sector partner to manage the climate risk associated with the project.



For PPPs to work, they require three things: clear output and performance specifications, strong incentive structures, and robust monitoring. This tool highlights how it can be used to encourage the private party to build more climate resilience actions into project. However, clear specifications and incentive systems are not enough – there needs to be an effective monitoring system in place. To do this, governments often hire an 'Independent Engineer' to monitor the private party's actions. The government party to the PPP could consider including in the Independent Engineer's scope of work a requirement to monitor the private party's climate related objectives.

**When in PPP process to use:** use when structuring the PPP contract.

**Length of time to implement:** as long as it would take to have a few discussions with key stakeholders

**Stakeholders involved:** Project Team; Enterprise Team; Advisors

**Expertise Required:** Understanding of government processes; Technical expertise related to the project (e.g. power engineer, transport planner, etc); procurement and legal specialties

**Reference Materials:**

- 'Revenue Regime and Payment Mechanism': <https://ppp-certification.com/ppp-certification-guide/51-revenue-regime-and-payment-mechanism>
- 'Payment Mechanism': <https://pppknowledgelab.org/guide/sections/63-payment-mechanism>

<sup>22</sup> <https://pppknowledgelab.org/guide/sections/63-payment-mechanism>

**Checklist: Questions to Ask when considering using payment mechanism to enforce/incentivize climate resilience**

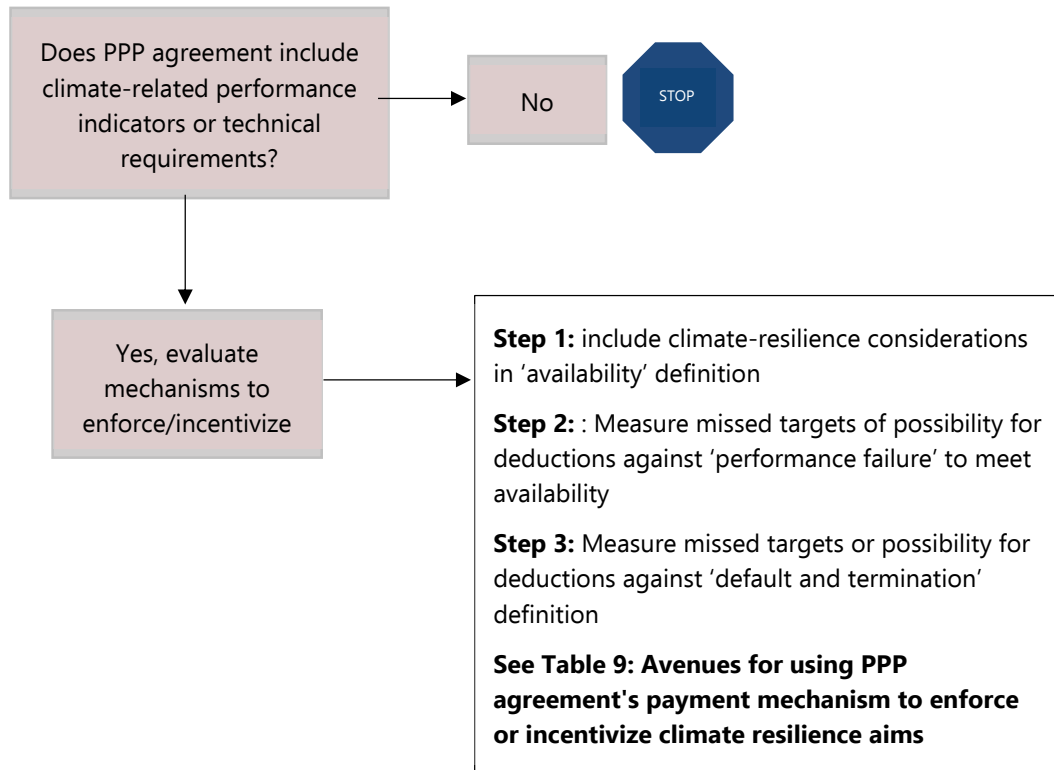




Table 9: Avenues for using PPP agreement's payment mechanism to enforce or incentivize climate resilience aims

### **1. Including critical performance standards in the definition of 'availability':**

The PPP agreement should clearly specify what is expected from the developer through 'key performance indicators' (KPIs) or targets. These KPIs, which should be objective, measurable and realistic, are usually included in an annex to the main PPP agreement.

Climate resilient related KPIs could pertain to resilient design and construction standards or facility management standards as well as requirements to update climate risk mitigation or disaster response plans.

When structuring a payment mechanism for an availability payment PPP, the government could consider including climate resilience considerations as part of its definition of 'availability.' In a PPP arrangement, the government should only pay for the asset if it is available. What 'available' means is defined in the contract. The definition is generally based on two criteria: i) whether the asset is physically available for use and ii) the condition criteria. Climate resilience considerations could be included in the 'condition-criteria' aspect of the 'availability' definition.

### **2. Using Performance Failure Definition to Apply Payment Deductions:**

The PPP agreement could include climate-resilience considerations in its definition of what constitutes as a 'performance-failure', and these failures could be linked to specific payment penalties, executed through the payment mechanism. Sample 'performance failures' related to climate resilience could include:

*Failure to develop, submit, implement and update throughout the PPP agreement term, all management plans as per 'Section X' of the PPP agreement. These include the Start-up Plan, Life-Cycle Plan, Environmental Management Plan, Energy Management Plan, Crisis Management Plan, Climate Risk Mitigation Plan, and Disaster Response Plan.*

### **3. Using Default and Termination Procedures**

The definition of Developer Default typically includes persistent breach of any obligation in the PPP agreement, and therefore "automatically" includes reference to climate resilient minimum requirements and the climate risk mitigation plan included as an annex. The occurrence of such "persistent breach" triggers a procedure in which the Developer is allowed to cure the breach within an agreed upon time period or the PPP agreement will be terminated.

Enforcement through payment mechanism<sup>23</sup>

The payment mechanism in the Project Agreement should be structured in such a way that it creates a financial incentive to comply with the requirements of the climate risk mitigation plan. Similarly, non-compliance should lead to penalties and/or deductions.

Performance Failure Deductions may be imposed by the Government in accordance with this Appendix [\_\_v\_\_].

Table [\_\_w\_\_] defines the Performance Failures. Each Performance Failure is summarized in the Table. Table [\_\_w\_\_] also indicates (1) the priority classification of each Performance Failure (low, medium, or high), (2) whether or not Rectification of the Performance Failure is allowable before the Government may impose a Performance Failure Deduction, (3) the second table to reference in Attachment [\_\_x\_\_] for calculating Deductions, and (4) establishes the point at which a Performance Failure is determined (the Recording Frequency): annually (A), semi-annually (S), quarterly (Q), monthly (M), or per occurrence (PO).

Table [\_\_w\_\_] – Performance Failures

	Performance Failure	Performance Failure Classification Priority	Is Rectification Allowed?	Table For Calculating Deduction Amount	Recording Frequency
k)	(...)				
l)	Failure to comply with the climate risk mitigation plan as such plan may be revised with the Government’s approval in accordance with Section [__y__] of this Project Agreement.	High	Yes	Table [__z__]	PO
m)	(...)				

Table [\_\_z\_\_] – Performance Failures for which Rectification is Allowed

Performance Failure Priority Classification	Required Response Time (days)	Length of Rectification Period (days)	Performance Failure Deduction per completed Rectification Period
High	(...)	(...)	(...)

<sup>23</sup> From: Force Majeure in Climate Resilient PPPs: Customization of the Government of Jamaica’s Standard Force Majeure Clause in PPP Contracts and Inclusion of Climate Risk Mitigation in PPP procurements (DRAFT 2021, Rebel).

Performance Failure Priority Classification	Required Response Time (days)	Length of Rectification Period (days)	Performance Failure Deduction per completed Rectification Period
Medium	(...)	(...)	(...)
Low	(...)	(...)	(...)

### 3. Sample TOR for Conducting a Climate Risk Assessment (CRA) <sup>24</sup>

These model ToR need to be adapted according to the specific project and its context. To respond to a variety of circumstances, this model includes a range of suggestions and options. **Actual ToRs derived from this model are likely to be shorter (max. 10 pages).**

Explanations or sections to be completed according to individual circumstances are given in *italics*. Complementary and explanatory information is placed in text boxes.

In Jamaica, a CRA is required if the high-level screening conducted during the project identification stage yields a Medium or High Risk. When conducting a CRA, it is important to define how the CRA and other studies will be incorporated in the formulation phase. There are four issues to consider:

- A clear **definition of the scope** of studies to be carried out at formulation is necessary to ensure complementarity and avoid overlap between the CRA and other studies (e.g., 'financial and economic analysis; other climate, environmental, social or vulnerability studies). Close coordination is therefore required in the preparation of the different ToR for these studies. Where possible the different studies should be integrated in a single process;
- In order **to ensure consistency** during the formulation phase, the same alternatives should be considered when engaging in different assessments (e.g., technical, environmental and economic);
- It should be ensured that the studies are based on sufficient technical information and assess **realistic options**, and that they can have an influence on the selection of project alternatives and on final project design through **appropriate measures**;
- Ideally **the CRA should precede the economic and financial analyses**, which must incorporate the costs of impact reduction and adaptation measures and possibly also value some residual environmental externalities and costs associated with potential climate change risks.

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<sup>24</sup> Modified from European Commission Sample Terms of Reference for a Climate Risk Assessment, accessed via: <https://europa.eu/capacity4dev/file/29944/download?token=6km6zFmT>

## ***ToR for the Climate Risk Assessment of (name of the project)***

### **1. BACKGROUND**

The (name of Ministry, Agency, Department) and the Development Bank of Jamaica require a Climate Risk Assessment (CRA) to be carried out for the formulation of (title of the proposed project). The CRA must examine:

- Climate-related risks to the successful realisation of the project's intended outputs and outcomes and revenue streams;
- Risks that the project will increase the vulnerability of human populations and/or natural systems to climate change and variability;
- Risks that the project will contribute to maladaptation;
- Measures to reduce climate-related risks and to adapt to climate change, to be described in a Climate Risk Management Plan (CRMP);
- Opportunities for promoting wider resilience and adaptation to climate change, and encouraging low-carbon development;
- (Other points to be examined e.g. the need for improved environmental and climate related information).

The project is described as follows: *(insert a short description, provide key information, such as objective, rationale for the project, location, duration, key beneficiaries, technologies, and practices to be employed, lifecycle of the project, etc. May use text from DBJ's concept assessment form.)*

Existing information on the project, the environment and climate *(including current climate conditions and trends, as well as future climate projections)* can be found in *(mention any available studies and information including the results of the identification phase and indicate where/how these documents may be obtained/consulted)*. *In addition to this CRA, the following studies are also envisaged (mention any other studies planned in the business case stage, including feasibility, economic and financial analyses or social and/or environmental impact assessments).*

*(Mention other pertinent background information, such as potential or known projects envisaged in the same area, key stakeholders, legal requirements, and existing SEA in the sector).*

### **2. OBJECTIVE**

The CRA will provide decision makers in the (MDA and DBJ) with sufficient information to justify the acceptance, modification, or rejection of the project for procurement as a PPP on the grounds of project sustainability and viability under climate change. Further, it will provide the basis for guiding subsequent actions, which will ensure that the project is carried out considering any climate-related risks and adaptation needs and options.

### **3. PROCESS**

The CRA is undertaken in two stages:

- i. A scoping study to define the scope of the CRA
- ii. The CRA study itself.

## 1. CRA Scoping study

Will summarise the project, identify key stakeholders, and describe the hazards, vulnerabilities and resulting risks to be assessed in the CRA study, based on information on current and future hazards and risks already available in key sources of climate information such as the State of the Jamaican Climate Report (2015), the write up from the project identification Screening, and other sources (see Appendix I, Annex 3). The scoping study will also specify what approaches, tools and methods are to be employed to assess key aspects of risk and vulnerability and key knowledge gaps. The types of risk reduction or adaptation measures to be assessed may be broadly identified during the scoping study, and monitoring and evaluation (M&E) mechanisms proposed. The scoping study may further define the limitations of the CRA based on a further investigation of data availability and the availability of other key resources (e.g., access to climate data and projections or impact models).

## 2. CRA Study

The CRA study will analyse climate risks to the project resulting from current climate conditions and trends, as well as future, long-term climate projections. It should address:

- **Climate change-related risks to project outputs**, including risks to the successful implementation of a project or its components. For example, the implementation of a project may be disrupted by the occurrence of climate extremes that are more frequent or severe than anticipated, or the integrity of infrastructure may be at risk from increased recurrence or magnitude of extreme weather events expected under climate change;
- **Climate change-related risks to project outcomes**. E.g, increased water stress due to lower rainfall and higher temperatures, that offset gains due to improved water use efficiency;

### The CRA scoping study will provide:

- An overview of the project, including the timescales associated with project implementation and intended outcomes. A description of any project alternatives;
- An overview of the relevant policy, legislative and institutional frameworks (if they exist);
- A description of the geographical, environmental and climatic contexts within which the project will be implemented, including a summary of readily available information on potential future climate trends and climate change as far as this is relevant to the timescales associated with the project;
- A description of the key stakeholders likely to be affected by the project, with specific reference to the specific climate-related risks;
- A stakeholder engagement plan (if relevant);
- A summary of the key current and expected future climate hazards relevant in the context of the project (teams should refer to the PPP Screening Level Climate Risk Assessment), and of the associated potential climate-related risks/implications for the project, that should be addressed in the CRA, insofar as these can be identified on the basis of the best available information;
- A summary of key issues relating to vulnerability and adaptive capacity as relevant in the project context as far as possible on the basis of existing information;
- A description of key knowledge/information gaps relating to current and future climate hazards, recent and potential future climate change impacts;
- Recommendations on the methodology for identification and assessment of specific climate-related risks, constraints and opportunities (including treatment of uncertainty) and the basis for the choice of methodologies to be used in the CRA to assess risks and vulnerabilities;
- Recommendations regarding any risk reduction or adaptation measures that might be identified and investigated further in the CRA, based on the work of the scoping study;
- An indication of the time frames, costs and resources needed to carry out the CRA study.

## **The CRA study will provide:**

- An identification and assessment of the potential climate-related risks to project at both construction and operations phase, which will impede the project from achieving its intended benefits or lead to significant cost overruns;
- An identification and assessment of the potential risks that the project implementation will increase the vulnerability of human populations and natural systems to climate variability and change, and to contribute to maladaptation;
- Recommendations, including a Climate Risk Management Plan (CRMP) for the implementation of proposed measures to reduce climate-related risks and adapt to climate change. The CRMP may identify and prioritise a number of alternative risk reduction/adaptation measures, detailing the pros and cons (e.g. costs, impacts) of each. The CRMP should also include a framework for monitoring and evaluating the performance/success of the proposed measures;
- Recommendations on how to adapt the project design (if required) to optimise the exploitation of opportunities arising from climate change (if any), to promote wider climate resilience, adaptation and adaptive capacity (e.g. outside the immediate context of necessary measures to reduce risks associated with the project), and to promote low-carbon development.

### **4.1. CRA SCOPING STUDY**

#### **4.1.1 Overview of the project**

A description of the project and of its components.

*(When feasible, describe any major project alternatives, with a focus on alternatives that are significantly different from the perspective of exposure and vulnerability to climate-related risks. If the project is subject to an environmental impact assessment (EIA), consistency must be sought between the alternatives studied under both instruments).*

#### **4.1.2 Legislative, institutional, and planning framework**

A description must be made of any institutional and legislative frameworks relevant to the project and its CRA, including an indication of the key applicable legislation, planning processes (e.g., land use planning), standards and norms that will have to be addressed in the CRA study. Reference should be made to the relevant documentation such as the Country Environmental Profile, National Adaptation Plans of Action/National Adaptation Plan (NAPAs/NAPs) or other national adaptation plans/strategies, National Communications to the UNFCCC, any relevant Strategic Environmental Assessments.

In a CRA, the engagement of vulnerable groups, most likely to be exposed to the climate-related risks to be investigated, and those that are particularly vulnerable to climate change, is especially important (e.g. people who depend on climate-sensitive livelihoods such as pastoralists and smallholders, or those living in areas of high exposure). An effort should be made to involve a wide range of possible relevant interest groups (including local authorities, local and regional NGOs, women, and indigenous peoples) in defining issues to be addressed in the CRA.

#### **4.1.3 Description of the key stakeholders and their concerns**

The engagement of stakeholders in the CRA process is a key success factor. Project stakeholders (key groups and institutions intended as beneficiaries of the project or project partners, and any groups potentially affected by any adverse - e.g., environmental or displacement - impacts of the project) will be identified.

Particular attention should be paid to typically less represented groups such as women, indigenous peoples and minorities.

Stakeholders will be engaged by the consultant to identify their concerns with respect to existing and anticipated climate-related risks and vulnerabilities, their perceptions of how these may be affected by the project, and their views about how these risks and vulnerabilities might affect the project results and impacts. This will contribute to the identification of key potential risks, project-climate interactions, and potential risk reduction or adaptation measures that will need to be addressed in the CRA study.

#### **4.1.4 Description of the key climate-related risks and project-climate interactions that should be addressed in the CRA**

(Particular attention should be paid to the climate-related risks to, or associated with, the project that are likely to be the most significant, considering the sensitivity of the project and any related / supported activities to climate hazards likely to be encountered over the relevant timescale, the vulnerability of key stakeholders to climate change and variability, the project's potential impacts on vulnerability, and the expectations of the stakeholders).

Based on contextual information on current and potential future climate hazards, the consultants should identify climate-related risks to be specially considered under the following categories:

- Risks to the successful or timely implementation of the project;
- Risks to the successful realisation of the intended project benefits over timescales that may be significantly longer than the lifetime of the project itself;
- Risks that the project may increase the vulnerability of certain groups;
- Risks that the project may increase the vulnerability of natural systems or resources;
- Risks that the project will contribute to maladaptation, increasing dependency on resources threatened by climate change.

#### **4.1.5 Summary of existing baseline information and scope of any expansion of baseline information**

The scoping study should summarise the information currently available, as relevant to the project, relating to:

- i. Current climatic and environmental conditions,
- ii. Potential future climatic conditions,
- iii. Relevant current and future climate hazards, impacts, vulnerabilities and related risks. Key information gaps in these areas should be identified, and the extent to which these information gaps may be filled by further study during the CRA study should be specified, as should the



nature of any additional information on these baseline issues that will be generated during the CRA study.

#### **4.1.6 Recommendations on the assessment methodologies to be used in the CRA**

An indication of the most appropriate tools and methods for carrying out the CRA study should be provided. These can include:

- i. Model-based impacts or sensitivity studies,
- ii. Participatory vulnerability assessments,
- iii. Scenario planning, indicator-based mapping exercises,
- iv. Or other methods such as expert review.

The limitations of such tools and methods should be specified, for example with regard to the spatial resolution of climate model output, the degree of confidence in downscaling studies, the extent to which key indicators capture the most important dimensions of vulnerability, and so on.

The ways in which uncertainty will be addressed should be specified, for example:

- i. By using multiple models or simulations,
- ii. A range of different scenarios, or a range of different assumptions about the future evolution of vulnerability.

#### **4.1.7 Indication of the timeframe, costs and resources needed to carry out the CRA**

The temporal and spatial extent of the CRA study should be specified, including the identification of any geo- graphical areas, communities/populations, institutions, natural systems, sectors or systems/infrastructure to be studied.

(The way in which risks are to be evaluated will be crucial in determining the timescale of the CRA; a CRA based solely on expert review is likely to be relatively short (for example 20-30 days), whereas a CRA involving downscaling and/or the development of computer models to investigate impacts may take many months and perhaps up to 2 or 3 years for large projects. Where modelling is not employed, other practical considerations must be taken into account, such as allowing time for the collection of data (e.g. in the form of household surveys / interviews to assess elements of vulnerability)).

A description and estimation of the resources required (in terms of budget, person-days, technical facilities/resources) must be provided, including a break-down of costs. If at this stage it is considered necessary to integrate other experts with specific skills (e.g. social scientists for vulnerability assessments), this should be proposed in the scoping report.

## **4.2. CRA STUDY**

The scope of the CRA study will be agreed with the MDA in coordination with the DBJ and other partners, on the basis of the results of the scoping study.

#### **4.2.1 *Climate risk baseline study***

##### 1. Existing climate risk context

This should describe the following existing conditions, as far as these are relevant in the project context:

- The geographical and environmental context of the project (e.g. location), and the current climatic conditions pertaining in the area(s) associated with the project. This should include a description of the main climate hazards and their impacts currently experienced in these areas (e.g. heavy rainfall and flooding, drought and food insecurity or interruption to hydro-power, storms or storm surges and mortality/dis- placement/destruction of property and infrastructure);
  - The existing vulnerability context in which hazards are translated into impacts, i.e. which aspects of the project, groups of people or systems are most affected by climate hazards, and what are the drivers (e.g. social, economic, geographic, policy, etc.) of their vulnerability?;
  - The level(s) of adaptive capacity in the relevant groups, populations, systems, sectors, institutions. What options are there for effective responses to manage and reduce existing risks, and what are the constraints that prevent action to reduce risk being taken?
2. Expected future climate risk context which should seek to examine how conditions might evolve in the future, with respect to:
- The potential future evolution of climate hazards (both sudden-onset and slow-onset). The characterisation of future climate hazards may be based on data from global and regional climate models, downscaling studies, and/or impact models (e.g., of water resources, coastal systems, ecosystems, etc.) Alternatively, this characterisation may employ expert judgment, past analogues (e.g., of extreme events/conditions), statistical techniques (e.g. to examine the impacts of changing means and variability of the occurrence of extremes using historical data as a baseline);
  - The potential future evolution of vulnerability, based on plausible assumptions about how the drivers of vulnerability may change in conjunction with changing economic, demographic, environmental and other conditions;
  - The potential future evolution of adaptive capacity, based on changes in access to resources and opportunities, and in constraints on adaptation actions.

#### **4.2.2 *Climate-related risk identification and evaluation***

Identification and description of the potential climate-related risks associated with the project, and evaluation, based on combined considerations of the relevant climate hazards and relevant aspects of vulnerability and adaptive capacity.

The identification of risks should address the following (summarised above in 4.1.4):

- Risks to the successful or timely implementation of the project, for example associated with climatic extremes which may be intensifying, and which may damage project infrastructure or otherwise disrupt implementation;
- Risks to the successful and sustained realisation of the intended project benefits over timescales that may be significantly longer than the lifetime of the project itself, for example resulting from climate change effects that undermine or offset the project benefits or that reduce the available of key resources (water, productive land, etc.) on which the realisation of benefits depends;
- Risks that the project may increase the vulnerability of certain groups, for example by reducing their access to key resources, constraining their options for coping with or responding to climate hazards and their effects, and compromising their capacity to adapt to climate change;
- Risks that the project may increase the vulnerability of natural systems or resources, amplifying the adverse effects of climate change on these systems/resources, and accelerating environmental degradation;
- Risks that the project will contribute to maladaptation, increasing dependency on resources threatened by climate change or contributing to development trajectories that might be unsustainable under future climatic conditions.

Risks should be described for different elements of the project, and for different stakeholders/groups participating in or affected by the project. Where risks are associated with the potential adverse impacts of the project (e.g. on vulnerability or maladaptation), project and no-project cases should be compared, considering the various project alternatives and including considerations of uncertainty for each case.

*(The timescales associated with different risks should be specified, as should the degree of confidence in the identification of risks. There may be significant uncertainty regarding some risks, for example those foreseen in the medium to long term, after project completion, which are associated with the uncertain evolution of climate hazards as well as vulnerability. The extent to which risks are associated with particular assumptions about the evolution of future conditions should also be specified, with the CRA study clearly describing how uncertainties about risk are linked with uncertainties about future climate (and socio-economic) scenarios.*

*Indirect risks should also be addressed. These might arise from climate changes and their impacts outside the areas associated with project activities, which result in changes in the "global" context of the project that affect project outcomes and impacts (e.g. trade relations, commodity prices, etc.)*

*Some attempt should be made to assess the significance of different types of risk, for example by ranking risks according to criteria such as likelihood and potential to undermine intended project benefits.*

*Quantitative analyses and descriptions of risks and the impacts associated with them should be presented where feasible (e.g. in terms of timescales, probabilities, potential damages or losses), although it must be recognised that such an approach will not always be possible, and that precision (e.g. in modelled impacts) does not necessarily indicate accuracy (e.g. if just one model or simulation is used, and/or ranges of uncertainty are not considered)).*

#### **4.2.3 Identification and evaluation of opportunities and benefits**

*(While the emphasis of a CRA is on identifying potential risks and measures to reduce these risks, a CRA study also provides a context in which opportunities may be identified for promoting climate resilience and adaptation, and, if appropriate, low-carbon development. These may include opportunities for piloting new climate resilient practices or technologies; for awareness raising, communication and training; for the promotion of risk spreading measures such as livelihood diversification and including the development of weather-related insurance; for gathering data and information on climate-sensitive systems; for linking with other relevant initiatives to promote resilience and adaptation; for improving policy dialogues. Low-carbon development can be promoted using renewable energy sources and micro-generation, and the selection of project alternatives with lower carbon footprints, where such choices do not have significant negative impacts on the project or on development at large).*

Consultants should consider where opportunities or “entry points” for new climate resilient practices or low carbon development exist in the context of the project.

#### **4.2.4 Measures and recommendations in relation to climate-related risks and opportunities**

Measures must be proposed to reduce the climate-related risks identified above and, if appropriate, to ensure that any opportunities are exploited effectively. These risk reduction or adaptation measures must be technically feasible, economically sound, and socially acceptable (i.e. they must take into account the views of the main stakeholders). The consultants must seek ways to optimise such measures, such that one measure does not reduce the effectiveness of another or, worse yet, cause an undesired significant impact itself. Where the timescales associated with the project are long, different measures might be required at different times, and consideration should be given to how shorter-term measures interact with longer term measures. In all circumstances, measures to reduce risks and adapt to climate change in the shorter term must be compatible with any longer-term adaptation needs, and it should be ensured that measures to deliver adaptation or reduce risks in the short- er term do not increase vulnerability or contribute to maladaptation in the longer term.

#### **Risk reduction / adaptation measures can have several distinct aims:**

- Measures to reduce physical exposure of any project infrastructure to climate hazards and their related impacts (e.g. sudden-onset climate-related hazards and disasters, slow-onset hazards such as sea-level rise);
- Measures to improve the project’s ability to operate under identified constraints that may change over the course of the project’s lifetime or on timescales over which continued project benefits are anticipated (e.g. choice of most water-efficient or energy-efficient production options, avoiding locating of water-intensive activities in areas where climate change is likely to increase existing water stress);
- Generalised reduction of the vulnerability of key stakeholders in the context of existing and emerging risks associated with climate variability and extremes, in order to ensure project success (e.g. where the focus is on the near term and/or there is high uncertainty about future changes);
- Countering any potential increases in vulnerability resulting from the project among certain

- groups or of specific systems (e.g. ecosystems, natural resources, landscape systems);
- Targeted measures to address specific impacts of climate change identified during the CRA study (e.g. where there is high confidence in projections of climate change and associated impacts relating to specific aspects of the project such as infrastructure);
- Enhancing of adaptive capacity through measures to increase access to key resources, raise awareness, deliver training on adaptation issues, to ensure that project implementation and the delivery of longer-term benefits account for and address climate change issues;
- Development of specific risk reduction / adaptation strategies and frameworks within measures may be identified, implemented and revised over time;
- Significant redesign of the project where it is concluded that the project or elements of the project may contribute to maladaptation.

Residual risks remaining after the application of the proposed risk reduction / adaptation measures must be identified and assessed. Based on this assessment the alternatives must be compared and recommendations made on the best alternative (with attention to uncertainties and the implications of these uncertainties for the identification of the best alternative). The comparison of alternatives must be summarised in tabular form.

If the proposed risk reduction / adaptation measures involve an additional cost (compared to the options currently considered), the CRA should include an estimation of these costs. It should also identify who would be in charge of implementing these measures.

In exceptional circumstances it may be concluded that a project is associated with so many risks, or risks that are so severe, that its prospects for success are extremely small. In such cases it may be recommended that a project does not go ahead, or that it is replaced with one or more alternative projects that can deliver comparable benefits.

#### **4.2.6 *Climate Risk Management Plan***

The Climate Risk Management Plan (CRMP) is a document that identifies the actions needed to implement the recommendations of the CRA study. The CRMP should clearly translate the recommendations from the CRA into an operational plan.

The CRMP of the project should include:

- A table (logical framework type) showing the objectives, expected results, objectively verifiable indicators, activities (mitigation/optimisation measures), and responsibilities for the implementation of those activities;
- Institutional arrangements for its implementation: responsibilities, role of the key actors, participation of stakeholders;
- Suggestions for contracts (environmental clauses: standards, potential requirement to prepare CRMP of the company) and contracting modalities (such as payments linked to results);
- A monitoring and supervision plan, which outlines how risk reduction and adaptation will be measured/ tracked, and which identifies appropriate indicators (e.g. of vulnerability, adaptive capacity, impact of measures in terms of development outcomes) and establishes frequency of

- monitoring, means to gather and analyse data, reporting systems;
- A response plan in case of unexpected results from the monitoring (e.g. unintended consequences, evidence that measures are not having intended impacts);
- A proposed schedule for activities;
- An indication of means (including personnel, technical resources, other requirements) and costs of implementing the CRMP.

#### **4.2.5 *Limitations of the CRA***

The major limitations, weaknesses and uncertainties of the CRA should be explicitly underlined. Areas should be highlighted where significant knowledge and information gaps remain, and where uncertainties cannot realistically be quantified. Where projections and assessments are based on limited data, a small number of models, simulations or scenarios, this should be highlighted, and any deficiencies in representing a reasonable range of possible future scenarios should be identified. Any apparent contradictions between model results and observations should be noted. All assumptions made in the prediction and assessment of the potential climate-related risks should be detailed.

#### **4.2.6 *Conclusions on climate-related risks***

This section will summarise the key results of the CRA, the recommendations (referring to the CRMP) and an assessment of the residual risks. Any additional information relevant for further economic and financial analyses or for the general formulation study should be provided. The limitations of the CRA and its key assumptions should be articulated.

### **5. WORK PLAN**

The work plan should include but not necessarily be limited to the following activities:

#### **CRA scoping study**

- Fact finding/data collection - clarification of ToRs<sup>25</sup>;
- Identification and engagement of stakeholders;
- Analysis/preparation of scoping report;

#### **CRA study**

- Review of documentation (e.g. CEP, NAPAs, NAPs, National Communications, relevant existing

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<sup>25</sup> As CRA is an emerging area of practice, with which development practitioners are generally unfamiliar, clarification of the ToRs may involve significant revision of the ToRs, particularly with regard to methodologies to be employed and the limitations of the CRA.

- SEAs, identification and pre-feasibility reports, climate relevant data);
- Review of relevant literature, policy and legislation framework (if these exist);
- Fieldwork, data gathering and analysis, including engagement of stakeholders;
- Risk identification and evaluation;
- Formulation of climate risk reduction / adaptation measures;
- Preparation of the CRMP;
- Preparation of the final CRA report.

On the basis of the proposed work plan and time schedule outlined, a detailed work plan for the CRA study must be provided in the proposal.

## **6. EXPERTISE REQUIRED**

The proposed CRA shall be conducted by a team of (number) experts, who should have the following profiles:

- Expert with at least 10 years' experience in climate change, with specific expertise in one or more of the following areas: impacts, vulnerability, risk assessment, adaptation and climate change integration/mainstreaming into infrastructure projects (*specify sector, if desired*). She/he would be the team leader;
- (*Number*) experts with 5-10 years' experience and with a technical background in (specify). (The number of experts and specialities may be revised or adjusted at a later stage on the basis of the results of the scoping study).

The team is expected to include experts with local or regional knowledge/expertise.

For each specialist proposed, a curriculum vitae must be provided of no more than ( four) pages setting out their relevant qualifications and experience.

## **7. REPORTING**

### ***7.1. CRA scoping study***

The scoping study must be presented in the format given in Appendix 1.

The detailed stakeholder engagement strategy must be presented two weeks after project initiation to (*names and organisations*) for comments.

The draft scoping report is to be presented to (*names and organisations*) for comments by (*date*).

Comments from the concerned authorities should be expected by (*date*). These comments will be taken into account in preparing the final scoping report. The final scoping report is to be submitted by (*date*).

### ***7.2. CRA study***

Feedback on the scoping study will be provided no later than (number) weeks after its submission, setting the scope of the CRA study. The CRA study will begin no later than (number) weeks after this date.

The CRA report must be presented in the format given in Appendix 2. The underlying analyses are to be presented in appendices to this report.

The draft CRA report is to be presented to (names and organisations) for comments by (date). Within (number) weeks, comments will be received from (list the authorities).

These comments will be taken into account in preparing the final report (*maximum...pages excluding appendices*) to be submitted by (*date*).

## **FINANCIAL PROPOSAL**

*(According to the contracting modality used, the MDA/DBJ should indicate the form in which they wish consultants to make their financial proposal, e.g. break-down by categories of costs, as well as indicate the maximum budget for this contract.)*

## **8. TIME SCHEDULE**

*(Insert time schedule.)*

The consultant should respond to this time schedule and indicate in their proposal how they intend to organise the work for this purpose. The time schedule can be revised according to the results of the scoping study.

## **9. APPENDICES**

### **Appendix 1. Standard format for the CRA scoping report**

Maximum length of the main report (without appendices): 25 pages.

#### **Structure of the report**

1. Executive summary
2. Description of the project under consideration and its alternatives
3. Applicable environmental legislative and institutional framework
4. Key stakeholders and their concerns
5. Key climate-related risks aspects and project-climate interactions to be addressed in the CRA
6. Climate risk baseline and areas of project influence
7. Proposed methodologies for assessing climate related risks
8. Timeframe and resources needed to carry out the CRA
9. Technical appendices
10. Stakeholder engagement methodology



- a. List of stakeholders consulted (including contact details)
- b. Records of stakeholder engagement
- c. List of documents consulted

## **Appendix 2. Standard format for the CRA report**

### **Structure of the report**

1. Executive summary
2. Background
  - a. Project justification and purpose
  - b. Project location
  - c. Project description and associated activities
  - d. Alternatives (if any)
  - e. Relevant policy, legislative and institutional framework

3. Approach and methodology

(This chapter must set out the approach and methodology used in the CRA and how the data and information collected have been incorporated in the findings and recommendations).

- a. General approach
  - b. Tools and methods for identifying and assessing risks
  - c. Relevant indicators
  - d. Assumptions, uncertainties and constraints
4. Climate risk baseline study
    - a. Current climate risk context (hazards, vulnerability, adaptive capacity)
    - b. Expected future climate risk context

5. Risk identification and assessment

*(Indirect risks and interactions between (i) different types of risk, and (ii) climate-related and non-climate stresses could form additional subject headings to ensure that these aspects are not overlooked. Table and diagrams should be used to summarise and clarify findings in this chapter).*

6. Conclusions and risk statement

*(This section must present a clear statement of the conclusions and recommendations on actions to be taken to ensure that the climate-related risks are adequately addressed in subsequent project preparation, implementation, monitoring and evaluation phases. These conclusions and recommendations must be complete, yet concisely and clearly formulated.)*

This section must include one of the three 'risk statements' set out below:

- The project (and any alternatives) are not associated with significant climate-related risks, provided that the measures recommended are followed through;

- The lower risk alternative(s) identified will be associated with some significant climate-related risks, for which adequate risk reduction / adaptation measures cannot feasibly be realised. Therefore, it is recommended to identify and assess additional alternatives or to check that the residual risks are acceptable given the expected benefits of the project;
  - Each alternative identified is associated with significant and unacceptable climate-related risks irrespective of proposed risk reduction / adaptation and monitoring measures. Therefore, it is recommended that the project proposal is comprehensively reworked and alternatives re-assessed).
7. Risk reduction / adaptation measures and residual risks. This section should provide the key points of the Climate Risk Management Plan (CRMP) in a Technical Appendix.
  8. Technical appendices
    - a. Input into the logical framework planning matrix of the proposed project design (intervention logic, indicators, assumptions and preconditions);
    - b. Data, data analysis, background material, figures and maps and other illustrative information not incorporated into the main report;
    - c. Other technical information and data, as required;
    - d. Records of stakeholder engagement;
    - e. Climate Risk Management Plan.
  9. Other appendices
    - a. Study methodology/work plan (2–4 pages);
    - b. Consultants' itinerary (1–2 pages);
    - c. List of stakeholders consulted or engaged (1–2 pages);
    - d. List of documentation consulted (1–2 pages);
    - e. Curriculum vitae of the consultants (1 page per person);
    - f. ToR

## 4. References and Tools

### 4.1 Jamaica Specific

- The State of the Jamaican Climate, 2015: <https://www.pioj.gov.jm/product/the-state-of-the-jamaican-climate-2015/>
  - → as of June 2021, this report is being updated with more recent information.
- Climate Risk Profile: Jamaica (USAID, June 2017): [https://www.climatelinks.org/sites/default/files/asset/document/2017\\_USAID-CCIS\\_Climate-Risk-Profile-Jamaica.pdf](https://www.climatelinks.org/sites/default/files/asset/document/2017_USAID-CCIS_Climate-Risk-Profile-Jamaica.pdf)
- Update of Jamaica's Nationally Determined Contribution (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC), (June 2020): <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Jamaica%20First/Updated%20NDC%20Jamaica%20-%20ICTU%20Guidance.pdf>

### 4.2 Global Resources

- Climate Resilient Public Private Partnerships: A Toolkit for Decision Makers (May 2020): <https://publications.iadb.org/en/climate-resilient-public-private-partnerships-a-toolkit-for-decision-makers>
- World Bank Climate Change Knowledge Portal: <https://climateknowledgeportal.worldbank.org/>
  - Jamaica Specific page: <https://climateknowledgeportal.worldbank.org/country/jamaica>
- The [Caribbean Climate Online Risk and Adaptation Tool \(CCORAL\)](#) guides users to identify whether an activity is likely to be influenced by climate change. The tool is focused on the Caribbean region. It may be completed in under two hours.
- [Think Hazard!](#) is a web-based tool enabling non-specialists to consider the impacts of disasters on new development projects. Users can quickly and robustly assess the level of river flood, earthquake, drought, cyclone, coastal flood, tsunami, volcano, and landslide hazard within their project area to assist with project planning and design.
- [Climate, Environment and Disaster Risk Guidance \(CEDRIG\)](#) developed by the Swiss Agency for Development and Cooperation, is a tool designed to systematically integrate climate, environment and disaster risk reduction into development cooperation and humanitarian aid in order to enhance the overall resilience of systems and communities.
- The [climate-smart PPPs section on the PPP Legal Resource Center \(PPPLRC\)](#) website draws together documents, tools, and platforms relevant to these topics in one place