Masterclass on Climate Resilient Infrastructure Public-Private Partnerships

African Union

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ICSI International Coalition for Sustainable Infrastructure

Module 5:
Toolkit for incorporating climate resilience into PPP infrastructure project

b) Contract Management Phase

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Contract Management Phase: Climate resilience intervention points

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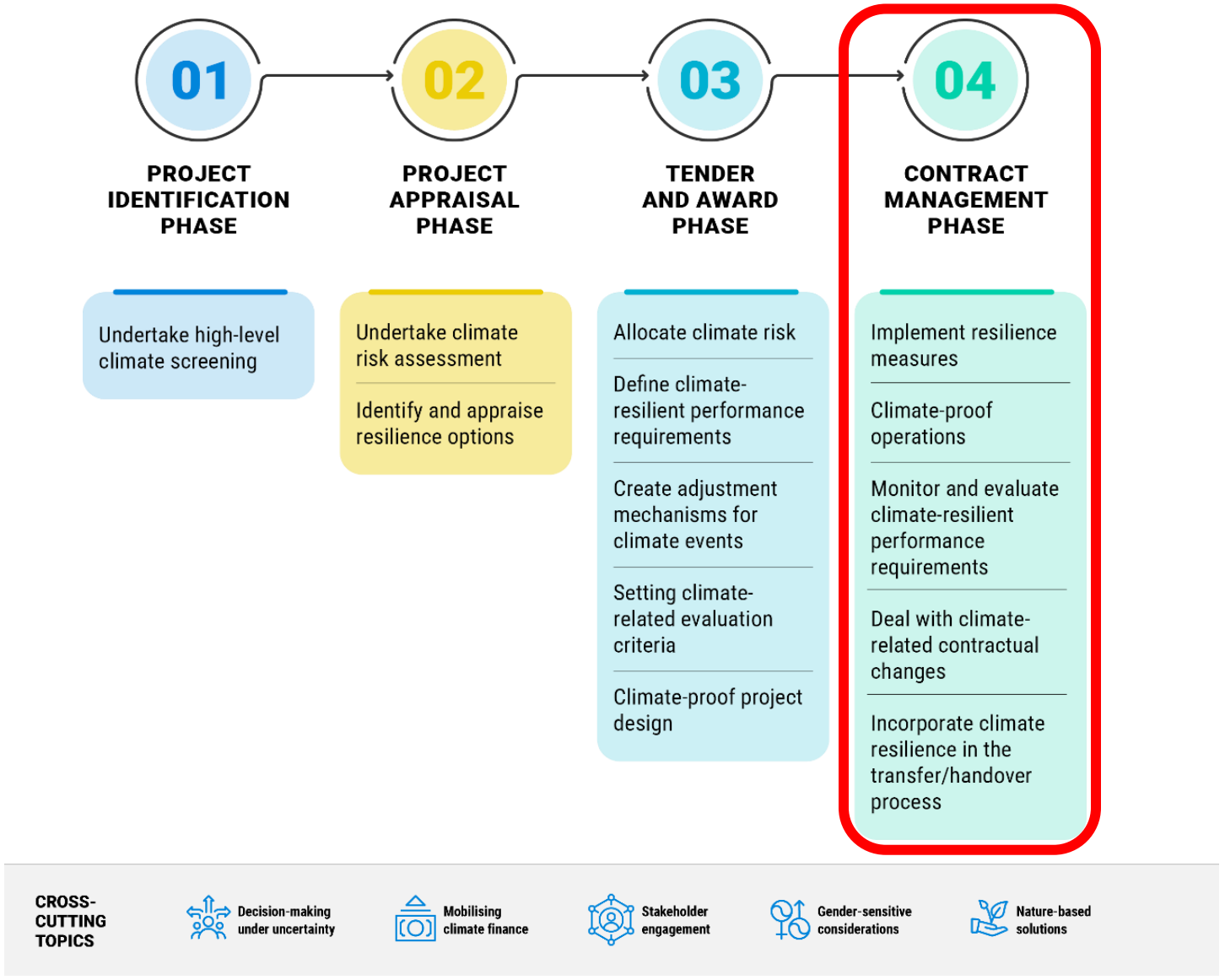

Outline

Contract Management
(PPP Performance Requirements, PPP Monitoring System, PPP Payment Mechanisms, Enforcing Climate Resilience)

Climate risk allocation in PPP contracts
(PPP Contracts, PPP Contract Change, Force Majeure, Uninsurability)

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The performance mechanism is the engine of the PPP contract

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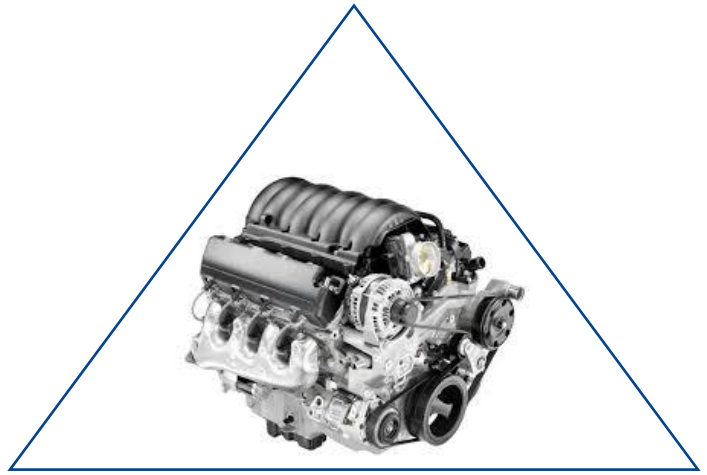
Clear performance targets



Reliable monitoring system

Effective payment mechanism

PPP Performance Requirements

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The best PPP Performance Requirements are output-based

Output-based performance requirements focus on what a project is intended to achieve, rather than the methods and materials used to achieve those goals

Input specification	Output specification
Construct this specified design	Make sure that the facility meets the functionality and esthetics standards
Use this type of asphalt and resurface every 7 years	Make sure the pavement always meets the following roughness index standard

Output-based specifications leave room for the concessionaire to decide how to deliver the envisaged services…

Input based specifications cannot be completely avoided

Output-based performance specifications are difficult to develop. In practice, public agencies often apply a combination of prescriptive requirements and output-based post-construction service requirements, for example:

Prescriptive requirements related to tunnel safety regulations

Prescriptive requirements related to inmates / guard ratio

Prescriptive construction requirements are not redundant because:

- Environmental processes and requests from project stakeholders often lead to specific requirements that need to be addressed
- The expected life of some project components – for example civil works – will (well) exceed the contract term

Common pitfalls in developing Performance Requirements

- Developing thousands of pages of highly prescriptive requirements: limiting all creativity and impossible to monitor
- Becoming too enthusiastic defining performance requirements, leading to “gold-plated roads” and “5-star prisons,” that comes at a cost
- Using standard performance requirements, not sufficiently tailored to project-specific circumstances and not reflecting contracting authority and community objectives

Integrating Climate Resilience into Performance Requirements

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Getting Started	○ Do climate risks determine whether project goals will be met? ○ Is project location subject to climate risks?	○ Yes, may impact life of asset and 'availability' of asset for use ○ Yes, floods, hurricanes, higher temperatures

Design and Construction Standards	○ Are certain standards – e.g. use of certain materials, or prescriptive design requirements - necessary?	○ Yes, **prioritized adaptation solutions**. E.g:
		  ○ drainage systems for road (e.g. culverts) for increased peak flows
		  ○ Asphalt permeability

Developing Availability Requirements	○ Are certain performance requirements associated with climate risk mitigation important sufficiently important to be included in the definition of 'availability'?	○ Drainage ditches along road must be clear of debris; non conformance can result in a deduction in payment
Developing Performance Standards	○ Performance requirements, not included in availability but important for climate resilience?	○ 'Records and Reporting' requirements of O&M require update of the Disaster Response Plan on an annual basis

PPP Monitoring System

PPP is based on self-monitoring

The PPP concessionaire will primarily monitor its own performance and report periodically to the contracting authority.

Most PPP contracts obligate the concessionaire to:

- Have quality assurance and quality control (QA/QC) procedures
- Have a monitoring system and give contracting authority access to it
- To provide the authority with the results from both sources

Verification and enforcement are still important…

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Contracting authority can **verify** by:

- Verifying the concessionaire's data / monitoring system
- Auditing the monitoring system
- Alternatively, an independent auditor can do an independent assessment (which prevents conflicts of interest)

Contracting authority can **enforce** by:

- Adjusting payments (penalties, deductions)
- Calling performance bonds
- Triggering remediable breach clause
- Triggering contractor default clause

Common pitfalls in developing a Monitoring System

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- Development of a monitoring system is often ignored until very late in the game, leading to the system not being ready before implementation
- PPP monitoring systems may need to be compatible with existing (asset) management systems, which they often are not (because it was not specified)
- In absence of a well-structured monitoring system, project teams get stuck with time-consuming, disorganized and un-auditable data
- Excessive data collection, leading to very high monitoring costs for both contracting authority and concessionaire in the operational phase

Integrating Climate Resilience into Monitoring System

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Monitoring Requirements

- Do climate variables need to be monitored?
  - Yes, where thresholds for transfer of certain climate risks from one party to another exist in the contract.
    - On-site vs 3rd party monitoring
    - Which variables?

PPP Payment Mechanism

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An effective Payment Mechanism aligns public and private interests

Contracting authorities want to ensure that concessionaires perform their contractual duties. Concessionaires want to get paid. Both are achieved with the payment mechanism

PPP payment mechanisms do not simply define a fixed payment for a service but include penalties and deductions for underperformance and sometimes bonuses for over-performance

Penalties, deductions and bonuses are linked to **KPIs** and **output-based and capacity-based specifications.** Payment mechanisms therefore align the interests of the contracting authority, concessionaire and other stakeholders

The Payment Mechanism is not the only instrument to incentivize

Agreements also typically have a mechanism for non-compliance or default points that, when they reach a specified level, can result in:

Increased oversight

Remedy plan developed under remediable breach process

Remedial work by the contracting authority at the concessionaire's expense

Suspension or early termination

The famous tickle-hurt-kill principle

Determining the level of financial penalties can be a challenge: they must be large enough to incentivize the private partner to make decisions in the public interest, but not too large to make projects overly expensive

For this, we can use the “tickle-hurt-kill” principle

If penalties are too low, the concessionaire may accept the penalty rather than pursue a remedy (“tickle”)

If penalties are too high, the concessionaire can be unreasonably punished - even defaulting on the basis of minor breaches of the contract (“kill”)

Therefore, the key is to set penalties that matter and motivate the concessionaire to pursue a remedy (“hurt”)

Common pitfalls regarding the Payment Mechanism

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- Contracting authorities may become too enthusiastic defining penalties and deductions, leading to significant cost increases

- Contracting authorities may hesitate to apply the penalties in the PPP contract due to concern over harming their relationship with the concessionaire (which is why penalties need to be gradual)

Enforcing Climate Resilience through the PPP Payment Mechanism

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Does PPP Agreement include climate related performance indicators with associated monitoring system?

No

STOP

Yes – evaluate avenues to use payment mechanism to enforce/incentivize

		EXAMPLE	CONSEQUENCE
1	Incl climate resilience measures in 'availability' definition	Availability of road drainage system according to specified cleanliness requirements	*Non-compliance with cleanliness requirements is considered an "unavailability event" and will result in a payment deduction of [●] per day*
2	Measure missed targets or possibility for deductions against 'performance failure' definition	Failure to update climate risk mitigation plan within rectification period	*Failure to update climate risk mitigation plan within [●] days will result in a payment deduction of [●] per week*
3	Measure missed targets or possibility for deductions against 'default and termination' definition	Continued non-compliance will trigger early termination clause in PPP agreement	*A total of [●] performance penalty points incurred over a period of [●] months will trigger the obligation to develop a cure plan, non-compliance with which will trigger early termination*

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Climate risk allocation in PPP contracts
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PPP Contract

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The PPP contract formalizes the partnership

- A PPP Contract is… a long-term written agreement between the public and the private sector, which will establish, among other things:

Definitions	Resolution	Rights and Responsibilities	Penalties

- Detailed contract design takes significant time and resources - including from expert advisors
- The contracting authority is generally responsible for developing the PPP contract

Structuring PPP contracts

The draft PPP contract is typically included with the Request for Proposals (RfP) sent to prospective bidders

Typically, contract authorities distinguish between the mandatory sections (cannot be changed) of the PPP contract and the non-mandatory sections (can potentially be changed)

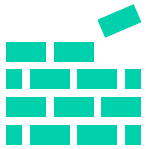
In some cases, the PPP contract issued with the RfP cannot be changed. In others, it may be changed as a result of the clarification process with bidders

A well-structured PPP contract is clear, comprehensive, and creates certainty

PPPs are long-term and can be complex

PPP contracts, however complete, cannot fully specify what is to be done under all circumstances

PPP contracts therefore need to have flexibility built in, to enable dealing with changing circumstances within the contract, and not requiring re-negotiation or termination



This is typically done by creating a clear process and boundaries for change

An example outline of a PPP contract

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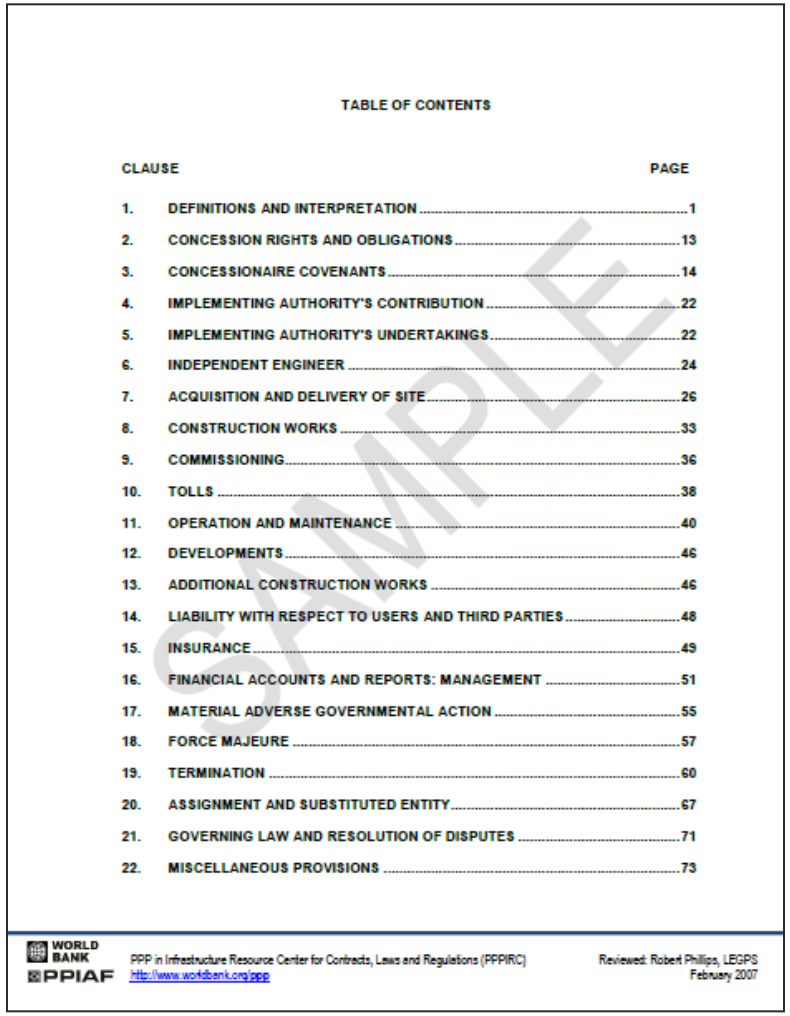
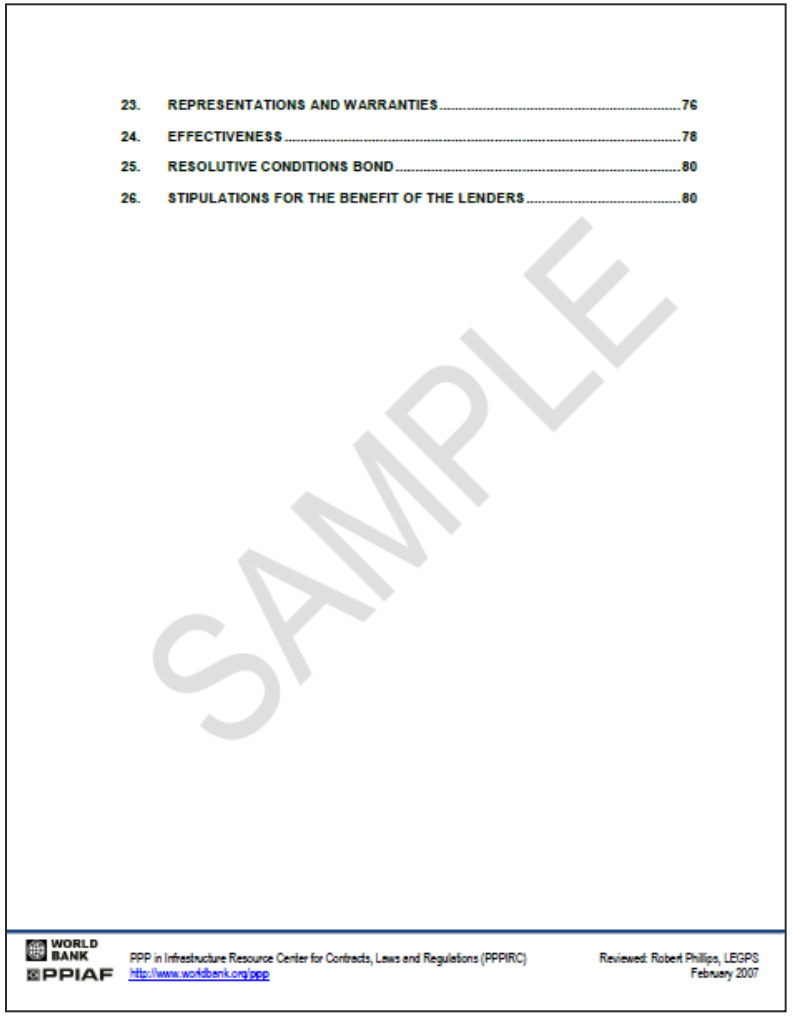


TABLE OF CONTENTS

CLAUSE		PAGE
1.	DEFINITIONS AND INTERPRETATION	1
2.	CONCESSION RIGHTS AND OBLIGATIONS	13
3.	CONCESSIONAIRE COVENANTS	14
4.	IMPLEMENTING AUTHORITY'S CONTRIBUTION	22
5.	IMPLEMENTING AUTHORITY'S UNDERTAKINGS	22
6.	INDEPENDENT ENGINEER	24
7.	ACQUISITION AND DELIVERY OF SITE	26
8.	CONSTRUCTION WORKS	33
9.	COMMISSIONING	36
10.	TOLLS	38
11.	OPERATION AND MAINTENANCE	40
12.	DEVELOPMENTS	46
13.	ADDITIONAL CONSTRUCTION WORKS	46
14.	LIABILITY WITH RESPECT TO USERS AND THIRD PARTIES	48
15.	INSURANCE	49
16.	FINANCIAL ACCOUNTS AND REPORTS: MANAGEMENT	51
17.	MATERIAL ADVERSE GOVERNMENTAL ACTION	55
18.	FORCE MAJEURE	57
19.	TERMINATION	60
20.	ASSIGNMENT AND SUBSTITUTED ENTITY	67
21.	GOVERNING LAW AND RESOLUTION OF DISPUTES	71
22.	MISCELLANEOUS PROVISIONS	73



23.	REPRESENTATIONS AND WARRANTIES	76
24.	EFFECTIVENESS	78
25.	RESOLUTIVE CONDITIONS BOND	80
26.	STIPULATIONS FOR THE BENEFIT OF THE LENDERS	80

Minimum contents of a PPP contract

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Rights and obligations of the parties	Performance standards and targets	Procedure for permitted modifications	Payment procedure and payment mechanisms	Security and performance bonds
Project insurances	Term of the PPP contract	Conditions for termination/compensation	Definition of force majeure and changes in law	Dispute resolution procedure

PPP Contract Change – Automatic Changes

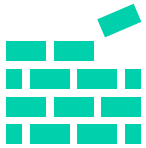
PPP contract typically use output-based specifications, which should provide flexibility

A robust contract is able to allow for anticipated changes, including:

- traffic volumes over certain volume
- addition of services
- escalation of costs

PPP Contract Change – Change Procedure

Even though the PPP contract provides flexibility, a contracting authority may need or wish to advance or change requirements (e.g., capacity increase)



Changes typically concern the technical requirements, not the main body of the contract, in other words: changes to the project, not to the contract itself

PPP contract will specify:

- the contracting authority's right to require changes to project
- conditions (e.g., the changes cannot conflict with law)
- compensation (for the net financial impact)
- procedures for negotiating changes
- consultation with independent relevant experts

Concessionaire also has a right to propose changes, but:

- subject to the contracting authority's consent
- performed at the concessionaire's cost

Climate resilience may require a simplified change procedure

- Changes to a PPP contract over its long life are inevitable. Changes related to climate change may be included in these – can changes to make a project more resilient be easier to make?

- Think about this when drafting and managing PPP contract

DRAFTING PPP CONTRACT

- Goals:
  - Anticipate possible climate related changes to the contract
  - If identifiable, price and include them in PPP contract
  - Ensure change management procedures clearly identified

MANAGING PPP CONTRACT

- Goals:
  - Contract management team understands contract,
  - Variation requests are clear
  - Clear roles for managing changes exist
  - Changes have clear audit trail

The PPP contract reflects the risk allocation

- In general, in PPPs, risks are allocated based on the ability and willingness of different entities to manage each risk. Allocating risks efficiently is the major way that PPPs can achieve VfM.
- The World Bank PPIAF suggest allocating risk in the following order:

1. Allocate risk to the party best able to control the likelihood of the risk occurring
2. Allocate risk to the party best able to control the impact of the risk on the project outcomes
3. Allocate risk to the party able to absorb the risk at lowest cost

The concept of supervening (=unforeseen) events

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Some of these risks may be beyond the control of the concessionaire; others may be best managed by the contracting authority

For risks explicitly allocated to the contracting authority, the PPP contract will provide protection to the concessionaire

There will be events or circumstances that negatively impact the concessionaire's ability to perform its obligations under the PPP contract within the time and/or cost originally projected

Three-tiered approach to supervening events

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- Thus, PPP development process is about analyzing risks and extent to which the developer should receive relief for events beyond the control of both parties
- Managing this has led most jurisdictions to adopt a 3-tiered approach to risk events:

Compensation Events 1

- Contracting authority takes risk
- Contracting authority pays/provides contractual relief to leave developer "no-better, no worse"

Relief Events (Delay Events) 2

- Developer takes risk but given relief from other resulting consequences associated with the event

Force Majeure Events 3

- Beyond control of both parties
- Render performance of all, or material part, of one party's obligations impossible
- Generally uninsurable, catastrophic events

Force Majeure

Force majeure provisions govern the course of action if unforeseen events that are beyond the control of the contractual parties (e.g. floods, war, acts of terrorism) occur and materially affect performance under the PPP contract

Force Majeure typically does not lead to monetary compensation to the concessionaire, but:

- Relief from obligations under the PPP contract
- Opportunity to terminate the PPP contract (if the event continues for an extended period)

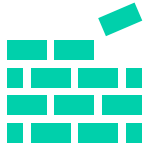
Force Majeure in the PPP contract

A Force Majeure clause in a PPP Contract:

Provides relief from liability to the affected party and excuses it from further performance of its obligations under the PPP Contract while the Force Majeure Event is continuing

Provides for the obligations of the Parties in relation to the Force Majeure Event (typically, information and mitigation)

Provides for termination rights in case of a Force Majeure Event lasting more than a certain period of time



Specifies the allocation of costs resulting from the Force Majeure Event and determine termination payments

Climate Risk and Force Majeure

- Many PPP agreements include an open-ended catch all definition of Force Majeure Events
- Most, if not all climate risk events will likely qualify as Force Majeure under this definition
- If a climate risk assessment identifies risks with a high likelihood of occurrence, the project team should determine if:

Risks can be excluded from the definition of Force Majeure

Risks can only be included if they are qualified (if they occur to a certain, for example, if rainfall exceeds a certain minimum threshold)

- Even if climate risks qualify as Force Majeure, compliance with a (climate) risk mitigation plan can be enforced in the PPP agreement

Guidance on defining Force Majeure in an era of climate risk (1/2)

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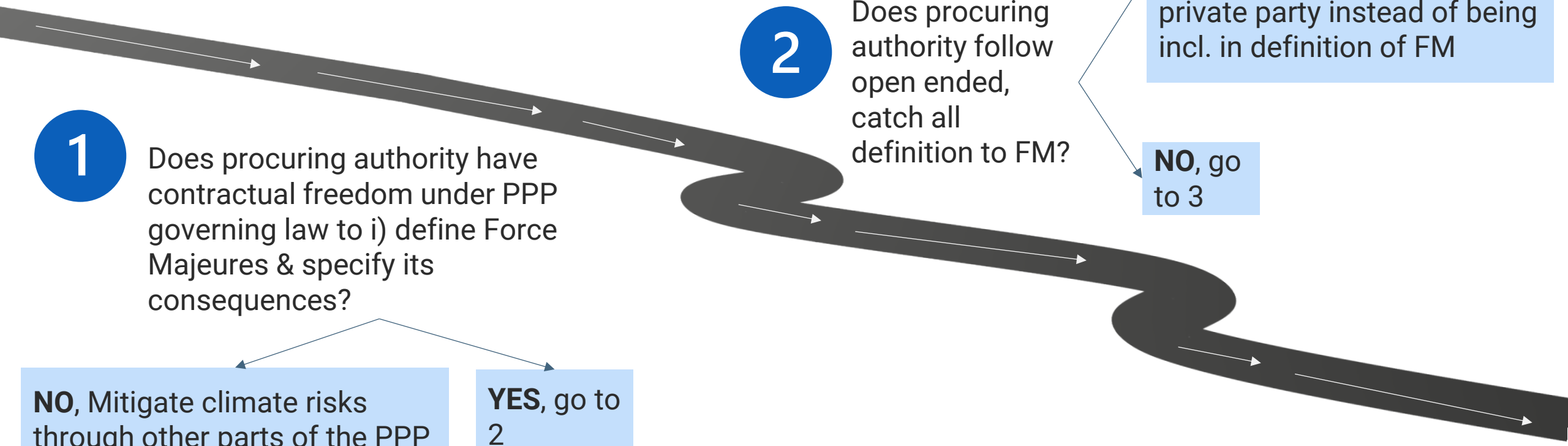


1

Does procuring authority have contractual freedom under PPP governing law to i) define Force Majeures & specify its consequences?

NO, Mitigate climate risks through other parts of the PPP (evaluation, performance requirements, payment mechanisms)

YES, go to 2

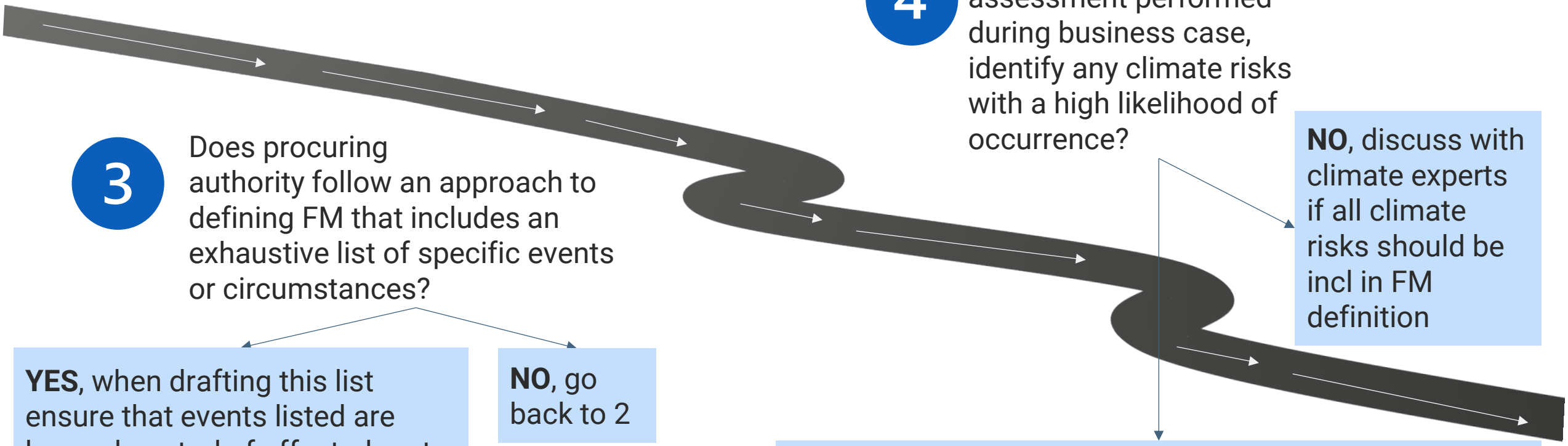
2

Does procuring authority follow open ended, catch all definition to FM?

YES, consider whether any risks can be mitigated against and passed to private party instead of being incl. in definition of FM

NO, go to 3

Guidance on defining Force Majeure in an era of climate risk (2/2)



3 Does procuring authority follow an approach to defining FM that includes an exhaustive list of specific events or circumstances?

YES, when drafting this list ensure that events listed are beyond control of affected party and would prevent it from performing. [Generally countries that define FM this way list out a very limited set of events that are uninsurable]

NO, go back to 2

4 Did results of climate risk assessment performed during business case, identify any climate risks with a high likelihood of occurrence?

NO, discuss with climate experts if all climate risks should be incl in FM definition

YES, work with climate experts and legal experts to determine:

1. If any can be excluded from FM definition
2. Or if for inclusion event has to be qualified (e.g. flood event of 1 in 100 year)
3. Bidders can be required to develop a risk management plan as part of their technical proposal

Insurance and un-insurability in the PPP contract

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PROJECTS REQUIRE INSURANCE

- Procuring agencies typically require private party to insure material project risks – e.g. accidental damage or third-party liabilities
- Availability, cost and obligation to take out certain insurances will depend in part how certain events are allocated

EXTREME EVENTS POSE CHALLENGES TO INSURERS

- These events are uncertain, but involve potentially high-losses
- Insurance industry trying to stay ahead, though a chance during long length of a PPP project that a climate related risks becomes uninsurable

UNINSURABILITY MEANS…

- Insurance is not available on the international insurance market by insurers of an adequate credit rating/reputable insurers of good standing
- Insurance premiums are prohibitively high

Handback Requirements

- Log of all climate hazard events that occurred, with details of their impact (asset condition inspections, repair costs, etc).
- Details of climate resilience measures implemented

- Informs climate risk assessment for remaining life of assets

Recap: Climate Resilience in the Contract Management Phase

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1

Performance mechanisms require clear performance targets, a reliable monitoring system and effective payment mechanisms.

2

However, payment mechanisms are not the only tools used to incentivize. Use the tickle-hurt-kill principle!

3

We can incorporate CR into construction standards, availability definition, and performance standards.

4

A well-structured PPP contract is clear, comprehensive, and creates certainty

5

In the face of climate risk uncertainty, a well-structured contract builds in flexibility

6

Climate resilience can be created by considering climate risks when defining supervening events

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