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Managing Disaster and Climate Risks in Infrastructure PPPs

While all PPPs inevitably deal with financing, construction, regulatory, demand, and operational risks, among others, projects in disaster-prone regions must additionally develop commercially and technically viable solutions for managing disaster risk.

For PPP projects, natural disasters and climate change can impose negative impacts on government, private sector parties, and end users of infrastructure services, including

- Asset damage and deterioration and reduced asset life,
- Increases in operating expenditure and the need for additional capital expenditure,
- Disruption to service provision,
- Loss of income,
- Increased risks of environmental damage and litigation,
- Reputational damage,
- Changes in market demand for services, and
- Increased insurance premiums or lack of insurance availability.

Governments play a central role in determining disaster risk allocation with a view to minimize these potential impacts. As with the many other risks that must be allocated in PPP for effective implementation (for example, construction, operation and maintenance [O&M], demand, political, regulatory), disaster and climate risks should be allocated to the public or private party that is best placed to manage them in a cost-effective manner. The allocation of these risks may depend on the probabilities and magnitudes of natural hazards, the criticality of the service to the economy and public safety, and the level of development of the PPPs and supportive insurance markets.

Approaches to managing disaster risks—whether via mitigation, avoidance, transfer, or planned acceptance—come into play at different stages of planning, project selection, structuring, contract design, monitoring and oversight, and post-event response. For example, contracts may be designed to appropriately allocate risks and incentivize risk mitigation by private sector partners; design and construction standards may be imposed to ensure more robust designs to protect against shocks; financial tools such as guarantees can transfer risks to ensure the viability of a potential PPP; and project planning principles and feasibility study requirements can help participants identify, avoid, and mitigate various disaster risks.

To successfully manage risks in PPP, governments must see that relevant disaster risks are thoroughly assessed, contractually allocated, and effectively managed in a manner that preserves PPP profitability. This often involves government playing a central role in promoting PPP resilience by way of contracting, regulatory oversight, and direct provision of some services to promote resilience. Given the contractual nature of PPP, another key role of government is to establish common definitions of and metrics for risks and potential disaster events that must be dealt with if their occurrence is likely to affect the operation or profitability of a PPP. This includes establishing clear definitions for 'force majeure' events—unexpected events beyond the control of government or the operator that prevent either party from complying with its obligations.