



## **Practical Measures for Adapting Infrastructure to Climate Impacts**

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**Abstract:** Where climate has already been an influence on infrastructure design, development, operations, and management decision making is the perceived changes in future climate impacts, compared to past working assumptions, which can impact or compromise the various infrastructure-climate performance criteria relationships. From the top down, efforts to present accessible technical opinions on future climate impacts, in formats that are familiar or useful to regional infrastructure decision makers, reduces the barriers to, and transaction costs of, adaptation.

From the bottom up, it prioritizes the evaluations of, and responses to, the infrastructure-performance-climate relationships of interest. This calculates potential vulnerabilities with current and future loads, related adaptive capacities and aids in making the most effective use of available resources. From the owner, shareholder, partnering financial institution, a directed management mandate to account for reasonably anticipated climate conditions over the life cycle of the infrastructure investment reduces the uncertainties or threats to otherwise achieving the various desired performance goals.

From the decision making communities, it will be either from the asset management and accounting, or the applied science communities, in order to ensure the development and broad accessibility of regularly improving codes, standards, protocols, and similar documents - that account for, or embed consideration of changing climate impacts. This will reduce the barriers and transaction costs for making such considerations, and improves consistency in quality applications. From the manager operators, updating, maintaining and preserving broadly accessible design, development, operations and management information, and affordable, publicly available climate based information, will improve the corporate memory and resources available to all decision makers, during the infrastructure life cycle.

**Summary:** For the life cycle of the infrastructure of interest: develop regional climate opinions, in familiar formats for the management mandated applications by decision makers; prioritize the applicable infrastructure - climate - performance relationships; where most useful, conduct evaluations of vulnerability and adaptive capacity; maintain corporate memories; and risk manage available resources.