

Estimating Relative Immediacy of the Climate Change Related Challenges in the Pacific SIDS

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Abstract

The paper outlines nine water-related challenges faced by the Small Island Developing States (SIDS) countries of the Pacific Ocean and maps them with the relevant Sustainable Development Goals (SDGs). The challenges so identified have been modelled using Analytical Hierarchy Process (AHP), a mathematical modelling technique to find out their priority weightage. Based on this weightage, the relative immediacy of each of these water-related challenges have been calculated. The findings reveal that the most immediate challenge is the rising sea level, followed by low water quality and its availability, and spread of water-borne and vector-borne diseases. Other challenges analysed in the study include those related to overfishing and exploitation of Exclusive Economic Zones (EEZ); soil erosion and coastal inundation; increase in incidences of natural disasters; coral reef damage and increased ocean acidification; climate refugee; and changing precipitation pattern. This study can be used by policy makers and inter-governmental organizations to direct allocation of resources for adaptation and mitigation efforts based on their relative immediacy, and can hence be prioritized based on availability of development aid or climate finances. The model can also be customized based on country-specific preferences of any SIDS country to determine which water-related challenge bear a high or low relative immediacy for policy intervention.

Keywords: Small Islands, SIDS, Pacific Islands, Water, Climate Change, SDG

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