

Vulnerability of Pacific Island Countries

PACE - SD FACTSHEETS SERIES: NO 4



[Source: PACE SD EU GCCA Project]

What is Vulnerability to Climate Change?

We all grow up becoming familiar with our surroundings and learn how to adapt to our environment and to cope with changing weather and climate. However, there can be limits to our ability to cope with these changes. With the projected changes in climate, local knowledge will no longer be sufficient to cope. It is important to weave together the local and scientific knowledge to make a path to take Pacific communities into the future.

How Will Climate Change Affect us in the Pacific?

Sea level rise is caused by the expansion of water as it warms and melting of ice, ice caps and glaciers. On average, sea level has risen 20 cm in the last 100 years. As sea level rise continues, we in the Pacific can expect more frequent and intense floods, storm surges and erosion - thus threatening vital infrastructure and settlements that support livelihoods.

Climate change can increase the intensity of tropical cyclones. Sea level rise, floods and droughts put people's lives and livelihoods at great risk. Money, time and resources are needed to re-build homes, farms and livelihoods and worse still, lives can be lost.

When it gets too hot, there are greater number of cases of respiratory problems, concern for heat stroke, and mosquito-borne diseases. Lack of rainfall can impact people's crops and food. Increased flooding puts children at greater risk of scabies, diarrhoea and other water-related diseases.

Vulnerability and Adaptation Assessments for the Pacific

PACE-SD has helped lead the way in Vulnerability and Adaptation (V&A) assessments for the Pacific. These assessments address climate change vulnerability for different areas of community life: water, health and sanitation, livelihoods, food and energy security, disaster and risk management, and mapping of vulnerabilities.



*Tidal flooding on Funafuti Atoll, Tuvalu, February 2005
(Source: Gary Braasch)*

V&A assessments begin with a community dialogue to examine a community's vulnerability to climate change looking and each area of community life. The goal is to produce and implement an action plan that increases the community's adaptive capacity.



Important for maintaining food security: Transplanting seedlings at the Taiwan garden, Tuvalu (Source: Gary Braasch)

"The degree to which a system is susceptible to, or unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude, and rate of climate variation to which a system is exposed, its sensitivity, and its adaptive capacity".

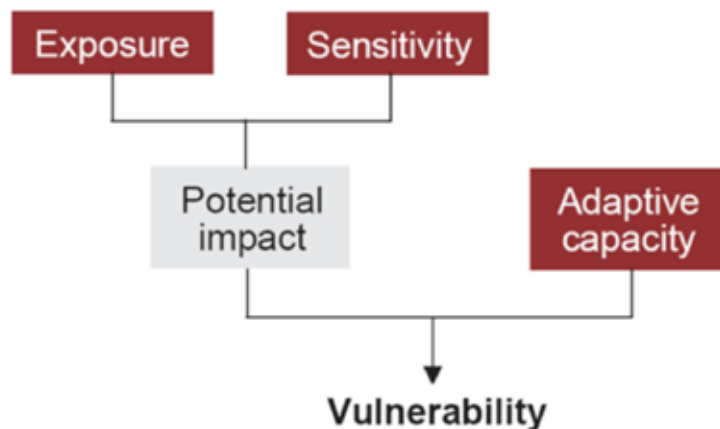


Figure 1: Framework for understanding vulnerability (Adapted from: Schroter and the ATEAM consortium, 2004)

In referring to Figure 1:

- Exposure to climate change is a function of location and geography. For example, coastal communities will have a higher exposure to sea level rise and cyclones. Sensitivity is the level at which a community is affected by climate stresses and change. For most communities in the Pacific, growing food depends on rainfall. No rain can mean no food.
- Adaptive capacity is the ability of communities and natural systems to adjust to climate change, including variability and extremes. Adaptive capacity is shaped by people's access to and control over natural, human, social, physical and financial resources (see Table 1).

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This factsheet was produced by PACE-SD under the funding support of the Australian Government's 'Future Climate Leaders Program' (AusAID-FCLP) and the European Union's 'Global Climate Change Alliance (EU GCCA) Project'.

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