

Climate Change and the Pacific Small Island Developing States

As climate change continues to wreak havoc worldwide, the international community has become increasingly concerned for the environmental and economic future of less developed countries (LDCs), which face acute difficulty enduring and recovering from climate disasters due to their poor infrastructure, weak governance, and low level of human capital. One group of LDCs, in particular, requires special attention, as their unique geographic characteristics make them especially vulnerable to climate change shocks: the Pacific Small Island Developing States (PSIDS).

PSIDS – which include the Cook Islands, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Samoa, Tonga, Tuvalu, and Vanuatu – are among the smallest, least populated, most remote, and lowest-lying countries in the world. Due to these characteristics, these micro island nations face particularly high risks from the adverse effects of climate change.

PSIDS' low elevations mean that sea level rise and coastal erosion pose urgent threats to their territories and perhaps eventually their sovereignty (Boto & Biasca, 2012). Nations like Micronesia, Kiribati, Tuvalu, and the Marshall Islands have upwards of 96% of their land and population living at 5 meters above sea level or less (UN-OHRLLS, 2015), and a global temperature increase of 4°C would completely submerge them (Boto & Biasca, 2012), demonstrating that even inland settlements are not safe.

People in Kiribati, the Marshall Islands, and Micronesia are already being displaced because of high sea levels and swells. These dangerous conditions are predicted to increase over the 21st century as a direct result of climate change, posing risks to the “social fabric, traditional culture, and way of life” of these nations (UN-OHRLLS 2015). In fact, the rise in climate

refugees from PSIDS already has governments seeking alternatives including land acquisitions, migration, and resettlement options (UN-Habitat, 2015).

Additionally, natural disasters induced by climate change destroy infrastructure and significantly hinder economic development for PSIDS. Given that extreme weather events are considered to have a greater relative impact in LDCs, PSIDS face an especially long road to recovery when disasters strike (Chen & Singh, 2020). With inadequate resources to respond in times of crisis, PSIDS may be forced to watch as natural disasters cripple economic processes, deal severe environmental damage, and disrupt entire communities (Boto & Biasca, 2012).

The perpetual cycle of borrowing to invest in public infrastructure and climate adaptation measures (UN-OHRLLS, 2015) after pervasive natural disasters destroy these projects has forced PSIDS to accumulate a higher debt burden than other developing countries on average (World Bank, 2020). PSIDS also receive exorbitant amounts of aid, with billions of dollars from bilateral and multilateral agencies funneled into building climate-resilient infrastructure, improving health facilities, and educating communities (Chen & Singh, 2020). However, the actual effectiveness of this aid is unclear.

Most recently, in January 2022, a volcanic eruption and the subsequent tsunami and ashfall devastated the nation of Tonga. This tragic event affected roughly 85% of the population and has caused immense damage (totaling approximately 18.5% of Tonga's GDP) to the infrastructure, agriculture, forestry, fishing, and tourism sectors (World Bank, 2022). Events like this may unfortunately become the new normal for PSIDS, as they are located in an area particularly prone to frequent extreme weather patterns (Chen & Singh, 2020).

Food security poses yet another problem for PSIDS, whose diminutive land size already restricts agricultural capacity. Unsustainable resource management, higher temperatures, changes

in precipitation and weather patterns, and frequent and intense natural disasters (UN-OHRLLS, 2015) have caused a decline in local food production. In response, PSIDS have had to rely heavily on imported food products. This has generated poor nutrition and unhealthy eating habits within PSIDS like Nauru, yielding some of the highest obesity and diabetes rates in the world (Laurance, 2011). In fact, food security is one of the leading reasons these island nations risk “becoming uninhabitable regardless of future sea level rise and inundation” (UN-Habitat, 2015).

PSIDS face a constant battle with climate change due to their geographical and natural difficulties. Moving forward, we should take note of their struggles and strive to offer solutions that promote sustainable economic development and climate resilience without compromising their independence. Adopting and integrating time-sensitive targets such as the UN Sustainable Development Goals would be a practical step in the right direction.

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