Living by the sea: coastal proximity in the Pacific region

KEY MESSAGES

- Most Pacific Island Countries and Territories (PICTs) share a dependence upon the ocean for food and economic development and their relationship with the oceans remains a central cultural touchstone
- Despite this dependence, but perhaps because of their small size, they are poorly represented in global analyses of vulnerability to seaward risks
- Distance from the coast is an important dimension of such analyses and is a proxy for vulnerability to sea-based threats
- Excluding PNG, 97% of Pacific Islanders live within 10 km, 90% live within 5 km of the coast, and slightly more than half live within 1 km of the sea
- Including PNG, about half the population of the Pacific resides within 10 km of the coast

CONTEXT

The coastal zones of Pacific Countries and Territories are hotspots of habitation and economic endeavour, with all the opportunities and risks that come with these activities. The ocean looms large as a source of food, wealth and cultural identity, but also as a source of acute and chronic threats. Tsunami, inundation and erosion caused by cyclone induced wave surge, and the long-term manifestations of sea level rise among other damaging phenomena all increase the exposure and vulnerability of coastal populations.

Understanding where people live in the coastal zone is fundamental in a range of policy domains. Demand for such information may be divided into two broad inter-related categories. Firstly, such analyses provide the foundation of integrated analysis of risk and exposure to sea-based threats, and acute risks from cyclones and other extreme weather events. Another broad category of need is in the management of the coastal zone in the face of multiple conflicting uses, including tourism, and urban development.

Distance from the coast is an important dimension of such analyses and, in the absence of elevation and other variables, is a proxy for vulnerability to sea-based threats. Information required to map and analyze the spatial arrangement of people is usually derived from national population censuses and from global datasets. Although the spatial resolution of data is improving, historically, there has been a mismatch in scale of data collection between demographic data collected in census

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enumeration areas and other relevant information, such as elevation, land cover, and vulnerability to natural hazards.

As Pacific societies respond and adapt to this complex opportunity and risk environment, there will be an increasing demand for information about where people live. We integrated global datasets with national surveys to estimate the proportions of households living with 1, 5 and 10 km of the coast.

RESULTS

Excluding PNG, almost all residents of PICTs live within 10 km of the coast and in five coral atoll nations (Kiribati, Marshall Islands, Tokelau, and Tuvalu) everyone lives within 1 km of the sea, as do nearly three quarters of Micronesians. Excluding PNG, 90% of Pacific Islanders live with 10 km of the sea.

Partially driven by the size, shape and geology of their islands, a greater proportion of Melanesians live more than 10 km from the sea; PNG was the clear outlier with 70% of the population living more than 10 km from the coast. In Polynesia, nearly everyone lives with 5 km of the coast.

CONCLUSION

PICTs are inconsequential in the arithmetic of global population summaries of exposure and vulnerability to seaward hazards. Nevertheless, the exclusion of these 22 countries and territories further marginalizes them from global narratives, particularly concerning the consequences of climate change. The results presented here will hopefully promote better inclusion of Pacific countries and territories in global summaries, lists of vulnerable countries, and improve national SDG reporting. Were that to happen, PICTs would feature prominently in 'top ten' lists of exposed and vulnerable nations and territories.

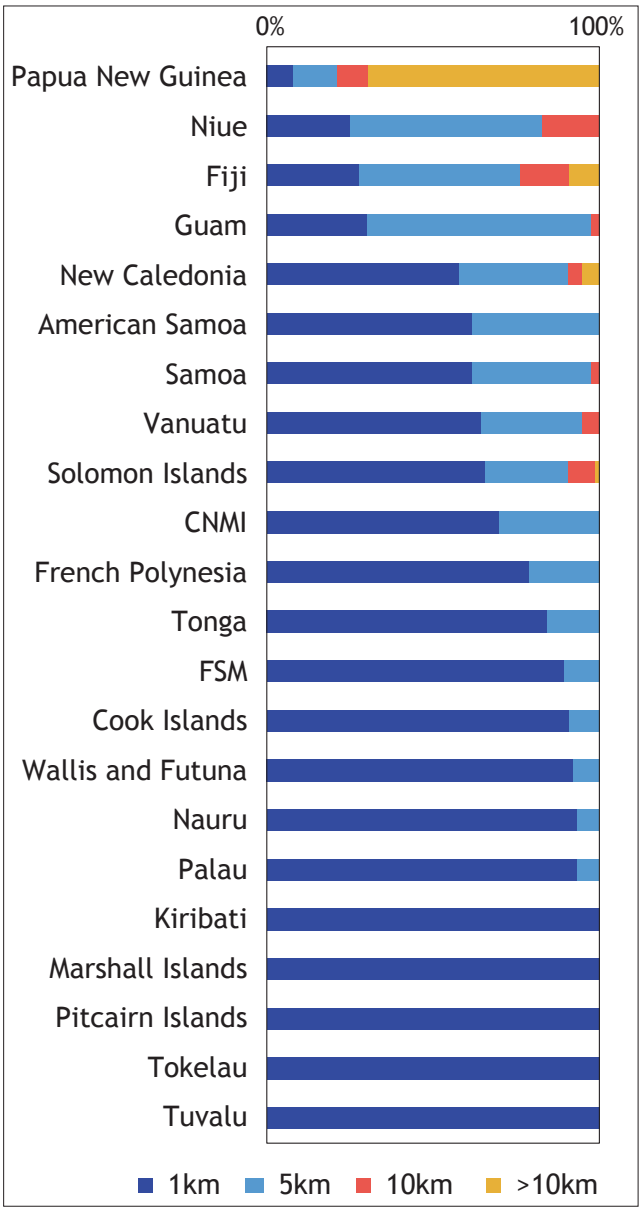

Figure 2. Proportions of households within 1, 5 and 10 km from the coast in 22 PICTs

SOURCES

- Andrew, N.L., P. Bright, L. de la Rua, S.J. Teoh, M. Vickers (2019). Coastal proximity of populations in 22 Pacific Island Countries and Territories. PLoS ONE. 14 (9), e0223249
- Data layers available online on the SPC website at http://sdd.spc.int/mapping-coastal

ABOUT

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