

Island evacuation

CASE STUDY

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Global environmental change is expected to have particular impact on islands around the world.

Islanders from Vanuatu and the Bay of Bengal have already been forced to move as a result of sea-level rise while many island communities in Alaska – in the face of fierce storms and rapid coastal erosion – are contemplating a move inland. Five main climate change-related factors, some interlinked, threaten the viability of living on

some islands, especially low-lying atolls: sea-level rise, increased severity and frequency of storms, changes to marine resources, increasing acidity of oceans and changes to freshwater resources.

some could lose the food supply on which they have relied. Similarly, for freshwater resources – often already in limited supply on islands – many places will experience drier conditions; even if more tropical storms bring more water, the damage wrought by them could offset the benefits of increased water supply.

be properly planned. Or would it be easier to convince people to go only after a major disaster? Then they risk loss of life and loss of possessions (including cultural/community artefacts). The main disadvantage with long-term planning is that an extreme event could strike at any time. A combination of both solutions could be sought, perhaps planning to leave quickly as soon as an extreme event threatens or strikes.

Sea wall in western Tongatapu, Tonga.

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Examples of entire island countries which are threatened by sea-level rise are Kiribati, the Maldives and Tuvalu. Additionally, if ice sheets collapse, much of their land could end up under water. With the expectation of tropical cyclone tracks changing while storms might become more

frequent and more severe, islands which had previously experienced few extreme events might have to deal with them more regularly.

Chemical, rather than geomorphological changes, could also reduce low-lying islands' habitability. Oceanic absorption of atmospheric carbon dioxide is leading to ocean acidification,¹ damaging coral reefs which in turn exposes islands to increased wave energy while changing the nature of near-shore fisheries.

For marine resources, the possible impacts are uncertain. In some places, numbers might decline and species might become extinct but many others could migrate. Some islands might gain more plentiful fish or other marine resources, while



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Depending on the exact impacts on specific islands, permanent displacement may be the only viable long-term option. Severe environmental change has led to islander displacement in the past. Approximately 700 years ago, sea-level fall and regional changes in the Pacific climate forced many Pacific islanders to abandon their settlements.

Decision making

If an island community decides that displacement or evacuation of an entire island is an appropriate option, the first decision is the timing of that migration.

Should the evacuation happen as soon as possible, before severe impacts of environmental changes are felt? This would enable migration to

After the timing of migration has been determined – or left to extreme events to decide – the second decision is where people should go in order to create a new community. Two options exist. They could abandon their identity and their community and integrate elsewhere. The 12,000 Tuvaluans still on Tuvalu, for example, could easily disperse among the millions of Sydney, Tokyo, Los Angeles or other large cities.

Rather than losing a culture, language and identity, however, island communities could instead be re-created. Resettlement on land (especially islands) similar to, but more secure than, their current location would be preferable but might not be feasible because most low-lying areas would suffer similar fates as the islands

being evacuated. As well, many potential island candidates for re-creating island communities are protected as environmental, tourist and/or scientific havens – or are uninhabitable due to their size or resource constraints.

Such resettlement could also require another state to cede territory. For the Pacific region, Australia and New Zealand are usually suggested as the most likely candidates to provide land. Other possibilities could be Indonesia, the Philippines, the Solomon Islands, Vanuatu, the US or Japan. Another option would be to create new land (perhaps through land reclamation) but this would involve legal ramifications – such as delineating the new state's territorial waters.

Sovereignty

Whether existing land or new land is used for resettlement, more decisions have to be made concerning levels of sovereignty or autonomy. Should sovereign states and non-sovereign territories be entirely re-created or should these governance regimes be adjusted? There are different options, including:

- joint access to an island's resources, as is the case of Svalbard in the Arctic
- a level of autonomy involving parallel and complementary justice systems, such as those for indigenous people in Canada and New Zealand
- a level of autonomy involving, for example, parallel currency systems.

Once a governance model is approved by all concerned parties, many practical and ethical questions remain. Who pays for the move and the construction of new communities or new land? How will any territorial or jurisdictional disputes be resolved? How will those to be displaced retain significant control over these aspects? If an island country is entirely evacuated but the islands are submerged only at the highest tides, who owns the fishing rights in the surrounding seas? Could those rights be sold, with oil and other mineral resources potentially being more valuable than fish? If a state is disbanded because of displacement

rather than re-created, how do the answers to these questions change?

Security questions also emerge regarding locations where islanders are resettled. Could a country claim a security threat from potential future sovereignty demands if an entire island country population is settled there? Could resettlement be used to reduce enmity and to galvanise international cooperation in solving environmental issues? (Studies in disaster diplomacy that have investigated this last point conclude that such opportunities are usually squandered.²)

These issues are not unique to islands. Many coastal settlements could suffer similar displacement for similar reasons. Although non-island coastal settlements have an 'inland' to which they can move, some islands also have that option, especially larger hilly islands such as Puerto Rico and Fiji's largest island, Viti Levu. Yet that would still result in significant changes, both for the people who must move and for the people already living 'inland'.

Learning from experience

Island evacuation due to global environmental change may be unique in living memory but island evacuation due to environmental change is not new. There have

been many island evacuations, for example, related to volcanic activity. However, there are differences between evacuation because of volcanic activity and evacuation as a result of global environmental change. Most islanders evacuated after a volcano starts erupting expect the evacuation to be temporary; in many cases, they return home even earlier than recommended. For global environmental change, many islands are expected to experience such severe and irreversible changes that return would not be possible for centuries to come. Temporary displacement is very different from leaving one's land, home and identity for ever. We need to learn from mistakes made in the past, especially regarding who makes decisions and who pays.

There is time now to draw on the experience of previous environmentally induced displacement, both island and non-island. Precautionary planning now would be prudent, rather than reacting after it is too late.

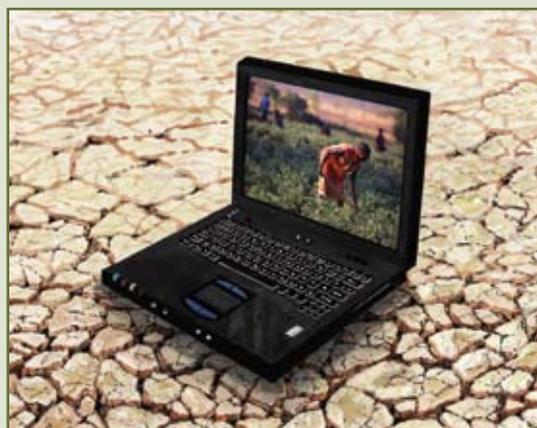
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1. www.royalsoc.ac.uk/document.asp?id=3249
2. www.disasterdiplomacy.org

Resources on climate change and displacement

A new Resource Summary on climate change and displacement is now online at: www.forcedmigration.org/browse/thematic/climate-change/

The summary, produced by Forced Migration Online (of the Refugee Studies Centre), provides a selection of key web-based resources plus contact details of many of the organisations working in this field.



Also available is a Research Guide on the same subject, online at: www.forcedmigration.org/guides/fmo046