## Climate and Migration in Oceania

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Thank you very much, and thank you for inviting me to come and to make this presentation here. I'm going to be talking about a group of countries that are often referred to as the first victims of climate change. It's not a term I like very much. One of the important things that we have to remember is that people in Pacific islands have capacity, they have resilience, and we don't want to undermine that when we talk about them being vulnerable all the time. Nevertheless, changes are taking place globally to the environment that are placing a number of Pacific island places at risk.

Before I start, I'd like to talk about two kinds of migration that are linked to climate change. The first is what's often referred to as "induced migration." This is where the environment of a place becomes less able to support its people. It doesn't mean that it cannot support all of the people, but it will be less able. And in those circumstances, people might choose to migrate. As Nina mentioned, migration can be a positive thing, and migration is one form of adapting to climate change. So, that kind of migration will be like the migration that we already have in the Pacific. For example, there are several hundred thousand Pacific island people living in New Zealand who have chosen to migrate for economic and for family purposes, over the last 20-30-40 years.

And the second kind, I refer to as "forced relocation." This will happen when a place is no longer able to support its population. Either the land on which they live disappears, which may happen because of sea level rise, or because they can no longer have livelihoods that are sufficient to support them, or if the place becomes dangerous to live in, because of increased disasters or changes in disease patterns such as, for example, malaria spreading to islands that don't, at present, have malaria. So, we call that "forced relocation" and that is when a whole community would have to leave and go from one place to another.

So, some of the reasons, then, are loss of land security, loss of livelihood security, and loss of habitat security. Or any combination of those, And there are a series of possible scenarios in the Pacific islands. Atolls, which are very low-lying — Nina showed a photograph of one in Kiritimati — may become uninhabitable through erosion, water shortages, and food shortages. And, people can no longer live on them. In many Pacific island countries, most people live near the coast, right on the coast. That's where they have their villages. And many coastal locations will similarly become uninhabitable. But also in the Pacific, there are people who live in river valleys and river flood plains, particularly on the large islands of Melanesia. These are the islands that are formed through the same geological processes as Japan, through subduction. So, you get large mountains, river systems, and some very fertile areas. With climate change, it's likely that flood events will increase in frequency and magnitude. So, some of those areas won't be inhabitable. Another area is deltas, particularly, again, in those larger islands of Melanesia and the western part of the Pacific. They are densely

populated, because the soils are very fertile, and there is a lot of marine life that can be obtained for food and economic benefit. And finally, there are areas subject to successive droughts of high magnitude, another possible climate change scenario.

Normally, people just focus on sea level rise, but there is much more to it than that.

Now, here are some estimates of atoll populations for the Pacific (Figure 1). So, just looking at the one group, and here we can see: Kiribati, Marshall Islands, Tokelau, and Tuvalu. They are four countries or territories that are made up only of atolls. They don't have any high land. Well, there is one in Kiribati, an island called Banaba, but people can't live there because it has been used to mine phosphate. So, these four countries are countries that see themselves, perhaps, as being most at risk.

And here is the summary: projected populations of the four atoll countries, Pacific island countries and territories — by mid-century, they will be around 283,000 people (Figure 2). And we can add another 67,000 people who live on atolls in other Pacific island countries. Those people have the possibility of going to some high land in their own country, but the people in atoll only countries don't have that opportunity.

So that's one group of people who might become climate migrants or forced relocated people. The second group are the coastal communities, and here, I've just done some simple calculations. We took 1% of the total population of the region, and, in most countries, about 75% of the people live on the coast. So, these are very conservative estimates. Papua New Guinea is an exception where a lot of people live inland, and they are by far the largest country in the Pacific Island region. So, if I only include 1% of Papua New Guinea, but 5% of the other countries, then we get up to 365,000 people possibly affected by mid-century, and then if we take 10%, it would be as many as 580,000. So, it just gives you an idea of the order of magnitude. Not all of these people may be forced to migrate, but at least it gives us an idea of the kinds of numbers of people we might be considering.

And then again, if we do the same sort of thing with people living on river flood plains and deltas, we could have between 180,000-900,000 people whose livelihoods, their land security, or their habitat security, is placed at risk. So, these are the people from whom initial migrants might be drawn from.

And drought, the most drought-prone place in the Pacific region is the highlands of Papua New Guinea, which has a population of about 2.8 million people (Figure 3). Papua New Guinea accounts for about 90% of the Pacific population. So, it dominates. Now, in the past, during major droughts, there has been significant migration to the urban areas. And the response which policy dates back to the time of the Australian colonization was to provide food relief to people in the highlands to stop that migration. Now, if these droughts become more frequent or more intense, then those pressures are going to increase.

So, we can look at possibly the number of people affected by the change that might become migrants (Figure 4). It could be anywhere up to 1.8 million people by midcentury. Now, that's just a broad estimate. It's not rigorous, but it's a kind of back-of-the-envelope calculation. And that excludes people affected by droughts, so that is a kind of idea of the magnitude. Now, compared to Bangladesh, that's nothing, but for

the Pacific island region, that's a lot of people.

Now, one thing I want to talk about briefly is the role of land in Pacific island countries. In most Pacific island countries, 95% of land is held in customary ownership. You can only inherit land through your kinship connections, through your mother or your father, or through marriage - you cannot sell it, and you cannot buy it. For Pacific island people, the land is so special that people think that they are part of it, and the land is part of them. They can't be separated. So, if they are forced to migrate or relocate, then that's a major psychological and cultural problem. Just migration is okay if you know you can get on a plane one day and fly back, but it's not so good if you've got to go away and can never go back. That is a major problem. So, these are issues that really affect and concern Pacific island people. Just to give you an example, in many parts of the Pacific, the word for land (fonua) is the same as the word for placenta, which nourishes the baby. And when people are born, quite often the placenta is buried in that land. And when you die, you get buried in that same land. So, the link between the people and the land is very, very strong. So, climate change has big implications for this particular relationship. In Fiji, the word "vanua" is the same as the Polynesian term "fonua". "People cannot live without their embodiment in terms of their land, upon which survival of individuals and groups depends. It provides nourishment, shelter, and protection, as well as security, and the material basis for identity and belonging. Land, in this sense, is thus an extension of the self, and conversely, the people are an extension of the land" (Ravuvu, 1988, p7). So, climate change poses a large, and we could say existential, threat, to Pacific island people, because if they lose their land, then they, in a sense, lose themselves.

So, then if people are forced to migrate or choose to migrate, where will they go? Well, there's a range of scenarios. They may, for a start, go somewhere else within their customary lands. And that's not uncommon, and it's easy to do, because you don't have to exchange land with anybody. It belongs to your clan or your tribe, and that is the best (Figure 5).

The second would be to go somewhere else near your village, but onto someone else's land. And that is very hard, because if you talk to Pacific island people, they would say I would like to help, but I can't, because I don't own the land. The land belonged to my forefathers and it will belong to my grandchildren and their greatgrandchildren. So, I can't give it away to someone else. So, that becomes a major problem. Or, people, who will probably be the most common, will go to urban areas, where they will become squatters on land that belongs to someone else, and typically in squatter settlements, the title is insecure, and the buildings are more temporary, so they are actually highly at risk from things like tropical cyclones and so forth. And then you've got the solution of going outside of your own country, and that's when you get the international migration of climate-affected people, either those who are induced to migrate to look for work, so they can send some money home to help out those who stay in the degraded environment, or also, by leaving, they reduce the pressure on them. Or the ones who are forced to leave because the environment just won't support them at all. So, a lot of people say that the best solution for people from the atolls would be going to another Pacific country. The cultures are more similar, the climate is similar, and a lot of people agree with that. The Pacific council of churches has made the same statement, and that is very interesting, because traditionally, in the

Pacific, most people are very devout Christians, and there is a strong belief throughout the region that climate change won't happen, because God mode a covenant with Noah that there will be no more flooding. And people accept that, and that was a big barrier to get people to take climate change seriously. But now the Pacific council of churches has accepted climate change, and things are changing in that regard.

And the final destination is beyond Pacific island countries, where you'll have to buy some land and live in that country. So, these are the range of options. And then, where to specifically? Well, the people from the atolls can go to towns or high islands, if they have any, and four of those countries don't. The coastal people can go inland away from the sea, or to town, to the cities, and the river flood plain people could do the same thing. But they would probably have to go to somebody else's land, and that will be very, very difficult.

The international options, well, the atoll countries can go to other Pacific higher island countries, like Fiji. There are some precedents where that has happened, where people have gone to relocate somewhere else. One group from Kiribati went to the Solomon Islands decades ago, still struggles to get accepted. When they had the tsunami and earthquake in the Solomon Islands, in 2007, I think, among the people who were worst affected were the people from Kiribati, even though they had been there for a couple of generations, because they couldn't get land on which to build a village, so they all lived down near the coast, and their villages were the most badly affected.

The other group went from Banaba, the phosphate island, to live on an island called Rabi, in Fiji. Now, Rabi is much more fertile than Banaba was, but the Fijian owners still want it back. And this is something that has gone on for generations and hasn't changed. And the third one was from an island called Vaitupu, in Tuvalu. They went to a small island in Fiji called Kioa, and that's been reasonably successful. But there's still a big group of people living in Vaitupu, still, so a person from that island of Kioa could always go home to his or her land.

Atoll countries and territories can go to their previous colonial countries. So, for example, if you were from Kiribati, well you could say, we were colonized by the United Kingdom. Surely that have some responsibility to look after us. Maybe we could go there. Former and current colonial countries include Australia, France, New Zealand, the UK, and the USA.

The UK is an interesting one, because it is very quiet. It doesn't say anything about taking "climate change refugees", even though the countries most affected, Tuvalu and Kiribati, were both British colonies.

The country that's most often mentioned is New Zealand. All of the islands in Micronesia are linked in one way or another to the United States, and they all have migration access to the United States. So, that's not such a big issue, but right now, the state of Hawaii is making a claim against the federal government because of the high cost of Micronesian migration to the state of Hawaii for health and education. So, they are bearing the costs of that arrangement. Australia was previously a colonist of Papua New Guinea, and France still has its colonies of French Polynesia, New Caledonia, and Wallis and Futuna. And those people can go to France, I believe, if

they wish. And then the next option would be to go to Pacific Rim countries, even if they don't have a colonial connection, and I listed New Zealand, Australia, the USA, and others, and I should have perhaps put Japan there, because Japan is a Pacific Rim country and is close to the region. In fact, it has a colonial background in Micronesia, and a lot of Micronesian people have Japanese surnames and Japanese ancestry. So, there is a possible linkage there that could be considered.

Just very briefly, the cost of community relocation gets more and more the further you go. The slide (Figure 6) illustrates the various borders that need to be crossed. These are not just international but are more notional borders. The further you go from your traditional lands, the more difficult is the relocation, some of which will be unsuccessful adaptation. How can a community, for example, from Kiribati, be shifted, as a whole community, to live in New Zealand or Japan and sustain their traditional way of life? It would be impossible. For example, New Zealand has very strict fishing laws. So, what happens to the Kiribati people who want to go fishing, which is what they do every day? So, I think this would be a real problem. And then finally, community relocation is extremely difficult and extremely expensive and costs increase with distance. There is an issue of who should pay for this relocation. Who should pay for the air tickets? Who should pay for the costs of actually going to live in another country? Should this be part of the climate change adaptation funding? Now, that's a big issue. Recently we have discussions in relation to the Paris Agreement, of conference of the parties to the UNFCCC on the issue of loss and damage. And that is the idea that people who are suffering the most from climate change would have some kind of compensation. And clearly, places like Bangladesh, and in our case, Pacific island countries have a real case to make a claim. But one of the problems is that there is no dollar value you can place on land.

Okay, and very quickly, there are long-term costs. Tensions over land do not go away. Getting water uphill — if you move your village uphill, who gets the water up to your village now? Usually it's the job of the women, and in our studies of communities where they have relocated up-slope, the women complain that they have a life sentence carrying water. The sense of loss, international relocation is extremely difficult and it's possible that communities may disintegrate and there will be a loss of culture. And then long-term dialog is needed; you have to start talking now between communities who might be hosts to the migrants and the forced relocation people, and finally there is the issue of who is going to pay.

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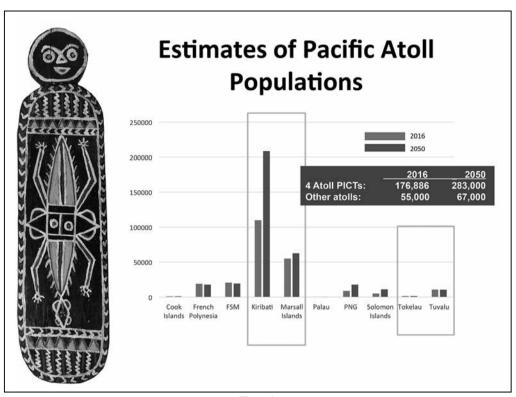


Figure 1

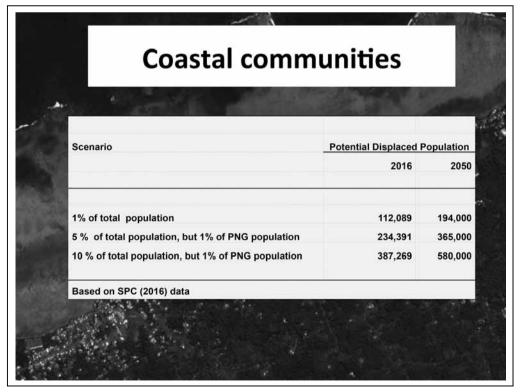


Figure 2

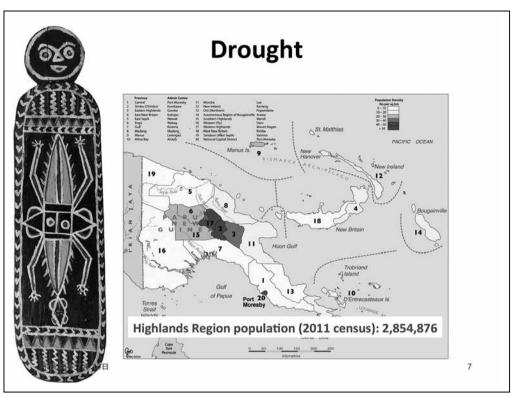
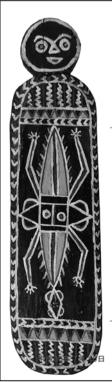


Figure 3



## Possible numbers significantly affected by 2050?

## **\*** Scenarios:

	based on 2016 estimates		based on 2050 projections	
	low	high	low	high
Atolls	230,000	240,000	350,000	350,000
Coasts	95,000	350,000	195,000	580,000
Rivers	100,000	500,000	180,000	900,000
Totals	425,000 1,090,000		725,000 1,830,000	

Note: this excludes people affected by droughts

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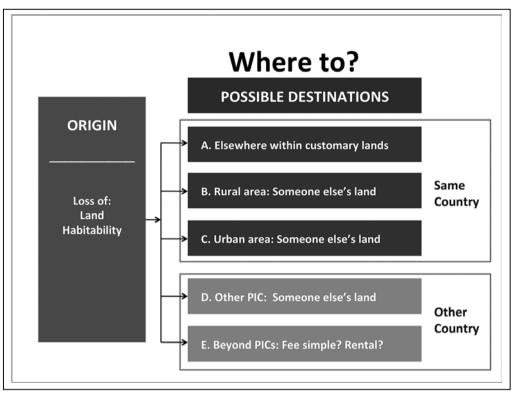


Figure 5

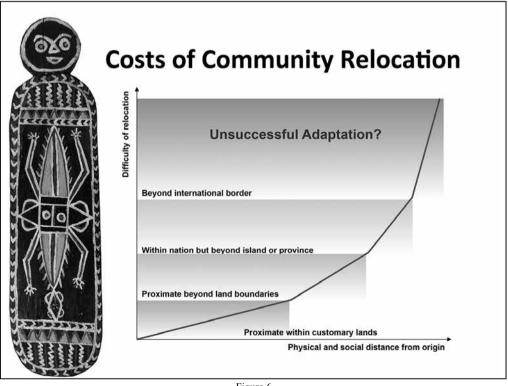


Figure 6