ANOTHER MANAM?
The forced migration of the population of Manam Island, Papua New Guinea, due to volcanic eruptions 2004–2005
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Cover photo: View of Manam Island from Mangem Care Centre on the mainland. Photo: Muse Mohammed © IOM 2016.

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ANOTHER MANAM?

The forced migration of the population of Manam Island, Papua New Guinea, due to volcanic eruptions 2004–2005

Prepared for IOM by

John Connell, University of Sydney
Nancy Lutkehaus, University of Southern California
In memory of Nancy Sullivan

1958–2015
**Pati Doi – Anua Magere (Our Beautiful Home)**

*Amari mange, abe kibala ma.*
*Masawako, kusuaki nge tago di ado.*
*Ugealako makasi lo kuteo ma*
*Rübem ba – ama ti – inare*
*Namam kira be kutaokama*
*Be anua tailalo. Kimaramama!*

The sun is slowly setting on the horizon
Here I am alone in a foreign land, finding it difficult to survive
I look far across the sea to the horizon
You protrude firm and lonely
You were frustrated and chased us
We become drifters in another man’s place

*Anua Negu*
*Anua Nema*
*Aburoma omo dieno*
*Motu anua*
*Anua Moagere*

My home
Our home
Our hearts are always with you
Our island home
Our beautiful home

— *Basse, 2015*
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Fieldwork was undertaken in May 2015 and, unless otherwise stated, all quotations in the text are from statements made by Manam islanders during that time or subsequently. Relatively little time was spent at Asuramba and Mangem, hence most of the information related to the care centre populations comes from Potsdam. We are very grateful to the many Manam islanders and others who discussed relevant issues with us. We are grateful to Susanne Melde, Julia Blocher and Wonesai Sithole for their helpful comments on an earlier draft.

At first use, Manam words and Tok Pisin words are identified by M and TP respectively.

We dedicate this to Nancy Sullivan who provided unfailing support to this project and who passed away tragically in July 2015.
Manam islanders were displaced from the island of Manam, off the north coast of Madang Province in Papua New Guinea, early in 2005 after extensive volcanic activity. About 9,000 people were evacuated, eventually to three principal “care centres”, former plantations, extending over 100 km along the north coast of Madang Province. Most of the displaced islanders have remained in these care centres for a decade. No emergency preparedness plans were in place for evacuation or resettlement. That has posed economic and social problems for them and created tensions with local landowners. Relocation on narrow strips of coastal land created conflicts with local people over the use of such resources as land for gardens, water, materials to build houses and access to marine resources, circumstances that challenged attempts to maintain food security. Access to land posed immediate problems for Manam islanders and has delayed attempts to achieve a durable solution. Past solutions to evacuation, through extended regional social ties and exchange relations, have become less feasible. As populations in the care centres have grown the quality of life there, where most islanders still reside, has deteriorated.

Over time, resettlement has become a difficult and complex political issue. The Madang Provincial Government has developed a plan for a new permanent resettlement site for the islanders at Andarum, some 30 km inland, but that will not be accessible for several years, and finance for its development has not currently been provided. A number of islanders have returned to Manam, especially to the northern village of Baliau, partly because of a residential preference but also because of tensions and violence with mainlanders. An effective largely subsistence lifestyle has been restored.

The national government regards Manam as unsafe and is unwilling to provide services and support for those who have returned. Nonetheless, a greater “return to Manam” may be a valuable option. Provision of basic services there is a priority. Over time, and given these circumstances, multiple destinations may represent the most economic, environmentally viable and culturally appropriate option, to meet the needs of an increasingly diverse and geographically dispersed Manam population. Uncertainty, lack of political will and the absence of a government policy on internally displaced persons have hindered attempts to provide definitive and durable solutions. As is also evident elsewhere, resettlement in situations of volcanicity is unusually difficult, but Manam poses particularly complicated land and logistical problems.

Involvement of the displaced persons and traditional leaders is crucial to the success of any planning and resettlement process. The Madang Provincial Government should urgently facilitate both Manam communities themselves participating fully in finding their own community-driven durable solution and rehabilitating essential services in the care centres and on Manam.
Manam at nighttime.

Source: Skeleton, 2012.
1. Introduction

Figure 1. Manam Island

Enough is enough. Lives have been affected. Our frustrations have affected the host community and as they say, it has caused a man-made disaster for them.

– Peter Muriki, 2015

Source: Lutkehaus, 1995:45.
This report examines the consequences of the resettlement of Manam islanders after eruptions late in 2004 and early in 2005 that made the island uninhabitable. The 10-km diameter island of Manam, some 12 km off the north coast of Madang Province (Independent State of Papua New Guinea, Papua New Guinea hereafter) is one of the country’s two most active volcanoes and has erupted at frequent intervals in the past. Manam is one of a chain of active volcanoes, situated on the “ring of fire” that extends along the north coast of New Guinea. Bam, some 50 km to the north, erupted violently in 1954, and the entire island was evacuated. Long Island, 250 km to the south-east, erupted about 300 years ago with an impact comparable to that of Mount Pinatubo, creating a “time of darkness” in New Guinea (Blong, 1982). Eruptions on Manam have been recorded from as early as 1616, and the Russian naturalist, Nicholas Miklouho-Maclay, was the first person to record this graphically in 1877. The outcome of the 2004/2005 eruptions was the evacuation of the island population of about 9,000 people to three principal care centres spread over a hundred kilometres on the Madang coast.

Manam has approximately 15 villages scattered around the perimeter of the island and 2 active summit craters, some 1,800 m above sea level. Most eruptions have originated from the southern crater, with the most active volcanic products being directed to the south and southwest. However, the island has four main radial valleys, along which lava flows reached the sea in 1946/1947 and 1958. In 1957/1958, pyroclastic flows descended all four valleys and the entire population was temporarily evacuated. In 1996, similar flows descended to the south-east and five villages were temporarily evacuated. In effect, however, the four radial valleys play a strong part in channelling pyroclastic flows and lava and thus are naturally valuable for disaster management.

Manam volcanic activity increased substantially in late October and November 2004. Prior to the eruption, villagers claimed that they witnessed such warning signs as blue smoke rings, grass dying at high altitudes, a continuous low tide and a very hot dry season (Mercer and Kelman, 2010), hence extreme events were not unexpected. At the start of November, 0.3 m of ash and hot volcanic stones (tephra) (Figures 12 and 13) had landed on the roofs of houses, between Yassa and Baliau, and ash had drifted as far as Wewak some 100 km to the west. Pyroclastic flows that had reached the sea destroyed gardens and coconut trees at Warisi village, and fresh lava flowed towards Bokure. The alert level was raised to stage 3 (out of 4), which encouraged voluntary evacuations from the island. These began on 24 November. By then, 20 houses had collapsed because of “mud rain” and tephra deposits, 5 people had been injured, many villagers were hungry because ash falls had destroyed their gardens and polluted the water supplies, and provincial authorities had called for food and funds to support the islanders. Lava was flowing into the sea between Warisi and Dugulaba. The damage caused to houses and gardens was much like that in 1958.

Although the alert level remained at stage 3, official evacuation of the islanders began on 27 November 2004, with one ship from the Lutheran Shipping Company based in Madang (with a capacity of about 500 people) making five trips from Bogia. The evacuation began with the four north-eastern villages (Kolang, Bokure, Abaria and Warisi) that had been most affected by ash and tephra deposition. They were followed by Boda and Kuluguma, then Zogari, Yassa and Waia, followed by the other Manam villages. Baliau was the last to leave. Although two people were initially reported to have died as a result of drinking ash-contaminated water, most islanders continued to reside on the island. After the experience of the 1996 eruptions, when 13 people died, the islanders did not need to be told twice to evacuate. Six hundred people had been evacuated by 28 November 2004, many making the crossing in private motorized dinghies, as well as using the main ship.

In early December 2004, volcanic activity slightly declined and the alert level was downgraded to stage 2. An estimated 1,300 people had been evacuated by the start of December, and the process of evacuation continued such that by mid-December, almost all Manam islanders had been evacuated. In mid-December 2004, volcanic eruption increased substantially with glowing lava fragments ejected more than 100 m above
the crater alongside substantial ash plumes. By 20 December, the alert level was again raised to stage 3 after a large eruption of ash. Volcanic eruptions from 27 to 28 January 2005 were even more severe than those in 2004, but this appears to have been the climax of the eruption phase (Johnson, 2013). A group of men fleeing from the island were fortunate to escape when their boat was bombarded off Warisi by tephra fragments and in the event, one person was killed in Warisi village.

By the time of evacuation in January, five people had died – two elderly women and three children – mainly from respiratory complications. Others were treated for minor injuries and shock. Some of the displaced persons returned to the island in early January but after the eruptions later in the month, most of them returned to the care centres. By the end of January, very few people were left on the island.

Most of the displaced persons brought with them just a few household goods (partly assuming that they would be able to return before too long). Most displaced islanders started living in mainland Bogia as the Papua New Guinea Red Cross delivered relief supplies and tents to four care centres – Asuramba, Potsdam, Mangem and Daigul – where water supplies and sanitation were already a problem. Wells were infested with mosquitoes. Daigul was then expected to be a more permanent settlement. A number of people went elsewhere on the coast; a group of Yassa villagers first moved to Liro, east of Bogia, where they had kin. Several Baliau households went to Bom village, near Asuramba. A few households had acquired land rights on the mainland through marriage ties and moved there. During the first week, the younger men built basic shelters in the care centres over which canvas covers were placed. It is not immediately clear why there seems to have been an early assumption that resettlement was not likely to be temporary as in previous times, although the increasing frequency and violence of the eruptions in January 2005 would have ruled out any immediate return.

By the end of January 2005, Manam Island was almost uninhabitable and eruptions were continuing. Many homes were destroyed, and the island was covered in layers of ash and tephra that were several tens of centimetres deep in the coastal areas (as much as 40 cm near Warisi) and much deeper on the steep upper slopes of the volcanic mountain. Food gardens were buried in ash and the tree branches were broken off, hence important trees such as breadfruit, galip (canarium almonds) and coconuts became useless. Relatedly, water supplies were also contaminated. This situation lasted for several months, and it was not until mid-2005 that the displaced islanders began to go back to Manam, though some individuals had gone back as “caretakers” to establish a presence on the island. The Red Cross, Caritas and World Vision provided emergency relief and assistance for the evacuees, while the Government provided rice, tinned fish and other foodstuffs for a year.

Past evacuations were almost always relatively short-term (nine months or less) or the impact of the volcanic eruptions was localized in specific areas on the island. Thus, in 1992, lava flows completely buried parts of Bokure and Kolang villages but had no impact elsewhere on Manam. In 1996, five villages were evacuated. By contrast, the 2004/2005 evacuation officially included the entire population and has been more or less permanent. Subsequently, volcanologists took a cautious approach, suggesting that the Manam Volcano might be due for a catastrophic eruption, and advising that it was not safe for islanders to return permanently. The latter has not yet proved true.
Since 2004, the bulk of the Manam population has lived in care centres along the coast of Madang with limited access to government services. Internally displaced persons (IDPs) still lack basic access to food and services, materials for repair or reconstruction of their houses, while existing land is not only inadequate but infertile. Recently, conflicts and clashes with host communities over land and resources forced thousands to return to Manam Island, despite warning from disaster authorities that it was not safe to return, and others have returned by choice. This report focuses on their seemingly uncertain future.

Table 1. Major eruptions of the Manam Volcano

<table>
<thead>
<tr>
<th>Year</th>
<th>Event Description</th>
<th>Evacuated</th>
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<tbody>
<tr>
<td>1904</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1917</td>
<td></td>
<td></td>
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<tr>
<td>1919/1920</td>
<td></td>
<td></td>
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<tr>
<td>1936/1938</td>
<td></td>
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<tr>
<td>1946/1947</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td></td>
<td></td>
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<tr>
<td>1974/1975</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992/1994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>c. 2,500 evacuated</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004/2005</td>
<td>c. 9,000 evacuated</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Based on Johnson (2013), plus modifications.

Note: Manam is constantly active; monitoring was absent in early years, and there is no consensus on what constitutes a “major” eruption, either in terms of volcanology or human impact, hence this table is merely indicative of a persistent pattern.
Settlements in Mangem Care Centre hosting former Manam residents.
Photo: Muse Mohammed. IOM © 2016
2. Early resettlement: The past as precedent?

Although the Manam Volcano regularly erupted in the past, only on two previous occasions in the past century did it explode with such violence and impact that populations needed to be evacuated. This occurred in 1957/1958, involving the entire population, and in 1996, when 2,500 people were evacuated. Beyond that, there have been occasional local movements on Manam itself.

On most such occasions, when some relocation has been necessary, Manam islanders have been supported by their relatives, and through more extended relationships between Manam islanders and coastal communities on the mainland. These relationships have traditionally been formalized through a system of exchange partnerships (M taoa/tawa). They have functioned as a means of help in times of emergencies.

In the past, when Manam islanders had to leave the island because of the dangers caused by volcanic eruption, they went to live temporarily with one or another of their hereditary exchange partners (taoa). Most taoa were in several coastal and inland villages from east of Bogia along the Madang coast to the Murik Lakes at the mouth of the Sepik River (Lutkehaus, 1995).

In December 1957, more than 3,340 Manam islanders were evacuated and accommodated by their taoa in various mainland villages stretching 80 km along the coast. They remained on the mainland until October 1958 when all had returned to the island. This roughly nine-month period appears to have been the longest time period over which islanders were evacuated prior to 2004.

In 1958, the Acting Assistant District Officer recorded that: “the Bogia coastal natives have set to and afforded every possible aid to the evacuated people billeted on them [...] by keeping up a continuous supply of building materials for the construction of houses and latrines” (quoted in Johnson, 2013:196). At the time of the 1958/1959 evacuation to the mainland, Australian officials were impressed at how accommodating the mainlanders were towards the displaced persons from Manam Island (Johnson, 2013). At that time, the islanders only remained on the mainland from March until October, and their numbers were very much smaller than the current population estimates of around 12,000. The number of taoa was also much smaller.

The specific details of the islanders’ extended stay on the mainland at this time are not known, although it appears that the Government coordinated arrangements with local people on the coast, alongside the Manam islanders’ own decisions.

In 1996, when a few people were evacuated from Manam, the Bialiue population were temporarily located in the coastal village of Lilau, east of Bogia, where they had taoa partners. Indeed, several Manam islanders had previously (and subsequently) acquired rights to land on the coast at such locations to be sites that might be used in times of emergency, and this proved valuable in 2005.
In the same year (1996), another significant group of islanders were also relocated further east at Mangem. Most of those who had been directly affected by the 1996 eruption soon returned to Manam. It was claimed by local landowners there that others from the island who were less directly affected moved in under the pretext of resettlement and were causing problems:

We feel that the longer these labourers remain at the plantation, we will continue to face problems. […] The Government without our consent had settled them there on a temporary basis and was to look for land somewhere where it could organise a permanent settlement scheme. However, it is almost 10 years since the Manam volcanic eruptions and we are still waiting.

(Post-Courier, 5 February 2004)

These were prescient words – 8 years after the eruptions of 1996 and just 10 months before renewed eruptions and more large-scale resettlement. It was unsurprising that the next wave of Manam islanders were not entirely welcome.

However, in the early days of the 2004/2005 resettlement, the Manam islanders were assisted by local people, as had been the situation in the past. But, when Manam erupted again, it necessitated the resettlement of many more people (close to 9,000) than any other population resettlement in recent Papua New Guinea history, with the single exception of the movement of people from Rabaul – over 25,000 – after the 1994 eruption of Matupit. More than twice the number of people from Manam Island than had been evacuated in the past were resettled in 2005, and most were eventually settled in care centres, not with their taoa partners. These care centres were all located among villagers who, for the most part (with the exception of some of the villages near Potsdam such as Mombwan I and Mombwan II), had no long-standing relationships with Manam islanders.

Despite history, and the geology of Papua New Guinea, there appears to have never been any recently approved plans, for evacuation and resettlement, prior to the 2004 eruption, and until now (and belatedly for resettlement in the case of Manam). Although, ironically, a detailed plan for the evacuation of Manam islanders had been drawn up by the colonial authorities in 1955 (and was useful during the December 1957 evacuation).

During the 1970s, the administration had tried to find and purchase land near the town of Bogia to settle Manam islanders but land was unavailable, even when and where the population density was low and the land was used for no more than hunting. It is not clear whether the administration anticipated new eruptions, and therefore new needs, and/or sought to achieve an outcome before independence and/or whether the islanders themselves then sought some form of resettlement. Local people were unwilling to sell land permanently and were also fearful of the islanders’ reputation for sorcery. Nothing came of these efforts, and nothing more happened for over 30 years.
Previous relocations from Manam have some similarities with the outcomes of the 2004/2005 movements. The most recent movements have broadly taken Manam islanders to the same places on the Madang coast, and have involved some linkages with traditional taoa partners. By contrast, however, the most recent relocation has been on a much more substantial scale, as the Manam population has grown significantly since the last century, and it has endured for a decade, since relatively few have returned. The increased numbers placed undue pressure on taoa and on coastal land and has meant that most Manam islanders were relocated quite quickly into care centres, where they have more or less remained. The present situation, where a durable solution for the Manam islanders has yet to be found, is thus quite different from that of all previous instances of evacuation and return.
3. Resettlement in care centres

Immediately after the 2004/2005 evacuation, “temporary” care centres were established on the Madang mainland for the Manam islanders who had been evacuated beginning late in 2004. The inhabitants of Boisa island, an extinct volcano less than 5 km from Manam, and badly affected by ash falls, were also temporarily moved to Daigul, on the mainland, but were able to return home relatively quickly. Given the advance warning that the islands’ populations had, and the assistance they received in evacuating the islands, there were very few casualties due to the eruptions. The care centres were established on coastal land that had once been three separate coconut plantations – Potsdam, Asuramba and Mangem – first established by German owners in the early twentieth century and then, after World War I, taken over by Australian owners. Daigul alone still operates as a plantation. After independence, the land that had been alienated by colonial governments from the original landowners was leased by the Government of Papua New Guinea to a series of individuals and groups for varying periods of time, but mostly remained in use as plantations. The three plantations had been purchased by a former Member of Parliament for Bogia, Tim Ward, in his personal capacity, and sold to the State to be converted into care centres for displaced Manam islanders, apparently without the consent of the traditional landowners.
Since the land where the care centres were constructed was effectively abandoned by plantation interests and uninhabited at the time of the eruptions, land was quickly made available. A decade later, the majority of Manam islanders remain at the three centres. The islanders were divided among the three centres on the basis of their village affiliations, and the geographic location of the villages on the island, as neighbouring villagers shared many relationships based on kinship and physical proximity.

A number of non-governmental organizations (NGOs), including Caritas and the Red Cross, and the Government of Australia, assisted in the resettlement, donating food and construction materials. They also installed a central water pump in each temporary village community. Many temporary shelters were constructed, initially creating cramped tent cities. Gradually, the residents cleared the land themselves (without government assistance), planted crops, coconuts and food-bearing trees, constructed more formal village-style housing, like that on Manam, and spread out as much as possible, replicating, again as much as possible, the more dispersed homestead settlement pattern of their villages on Manam. Nonetheless, population densities in the care centres are very substantially higher than they ever were on Manam and have continued to increase over time.

Not only was the number of resettled Manam islanders substantially greater than during the last resettlement in 1996, probably four times that number, but the vast majority were not relocated near traditional exchange partners, and they have been there more or less permanently. Each of these factors has contributed to social tensions. Although Manam islanders were resettled according to their former village allegiances, and were therefore able to maintain some of their traditional forms of social organization and leadership in the care centres, social relations were strained both in a new physical environment and because of uncertainties about return or further resettlement. Leadership was initially weakened in a new context as leaders experienced a lack of involvement in crucial decision-making about their future. Durable solutions reflecting the positions and priorities of either provincial or national governments, or those of Manam and other local leaders were absent, emphasizing the need for solutions to be participatorily owned, planned, implemented, monitored and evaluated by the IDPs with the continued guidance of leaders of the existing socioeconomic groups.

While the exact numbers are uncertain, about three quarters of the Manam islanders were initially settled in four care centres while the others – perhaps as many as 2,000 – were resettled, or effectively settled themselves, in local villages in the same general area, with friends, relatives and taoa partners. Thus, after the initial evacuation to the mainland, some Manam islanders may have subsequently sought out taoa partners, while others, such as some Budua villagers, resettled themselves in Mandi Bay, north of Potsdam. Dugulaba villagers, divided into two communities on Manam, seem to have gone to both Mangem and Potsdam, while villagers from Mokule, an offshoot of Dugulaba, went to Tobenam, a village near Daigul plantation. Again, the settlement in the care centres and nearby areas replicated the village groups on Manam. Within three years, the four care centres had been consolidated into three.

After the exigencies of the immediate resettlement, housing, food and water became major issues. Two critical ongoing problems were related to land access and tensions with the “host” villagers. Ultimately, the problem of relocation was not so much that Manam islanders were resettled away from their taoa partners but that they simply overstretched their welcome from the host villages – whether relationships were based on taoa partnerships or not – especially when it became apparent to the hosts that there was little prospect of a speedy end to the care centres. These issues are discussed as follows.

**POPULATION**

At the time of the resettlement, the Manam population was estimated at around 9,000. The resettled population has grown subsequently (but most media population estimates, ranging up to 20,000, seem far too high). The 2011 census records a total Manam population, that is the
The forced migration of the population of Manam Island, Papua New Guinea, due to volcanic eruptions 2004–2005

Another Manam?

The forced migration of the population of Manam Island, Papua New Guinea, due to volcanic eruptions 2004–2005. The population of the Iabu Local Level Government area (including Boisa), of 9,908, which suggests that the resettled population was actually fewer than 9,000. The Iabu Local Level Government Council (LLGC) area simply covers Boisa and Manam but, after the eruption, it effectively includes the two islands and the three care centres. The 2011 census was undertaken on a de jure basis which, firstly, means that it probably includes most Manam islanders wherever they were then resident (hence, Manam islanders in Madang town or elsewhere in Papua New Guinea may have been included), and, secondly, it is not possible to tell from the census whether the enumerated populations were on the mainland only, or included residents who had returned to Manam itself. That means that it is impossible to say how large the resident population of Manam was. The relatively small population of Boisa (433) had returned there, but many villagers from Baliau and elsewhere had returned to Manam.

While all the visible evidence suggested that the Manam population is growing quickly, it was impossible to assess the rate of growth. The islanders regularly expressed concern over the future of their children, but there was no obvious conscious interest in reducing the rate of population growth. In the past, there were two Catholic mission stations on Manam, and many of the islanders are Catholic. There is a Catholic church in the Potsdam care centre built by the Zogari villagers. As one prominent Manam islander observed: “Our population is booming, we are heading towards a population disaster; now we need two places for resettlement.”

Since resettlement in the care centres was organized according to village affiliation, the de jure populations of the care centres in 2011 were as follows: Potsdam 3,804 (Boda, Budua, Madauri, Waia, Zogari and Yassa villages); Mangem 2,297 (Bokure, Abaria, Dugulaba/Mokule and Warisi villages); and Asuramba 2,214 (Baliau, Kuluguma, Dangale and Kolang villages). That gives a total of 8,315, indicating a substantial undercount. The present Manam population in the care centres and on Manam may be as high as 12,000.

Since a substantial proportion of the Baliau population (enumerated at 1,160 – the largest village on Manam) had returned to Manam, the care centre population of Asuramba was somewhat smaller than these figures suggest, but these totals must also be smaller for the other two care centres. Thus, by 2015, Potsdam was much the largest of the care centres accounting for around half of the resettled population. It is possible that the census data excludes the Manam islanders on Manam, and that the Asuramba figure is accurate; there are more Manam islanders in total than the census figures represent.

ENVIRONMENT

The Madang coast represents a rather different environment from that of Manam Island. Moreover, not only are all the care centres on the coast but, especially at Potsdam, houses were located extremely close to both the north coast road and the sea, which has resulted in a new awareness of certain environmental issues. Houses on Manam, while not necessarily far inland, were and are tens of metres above sea level. In Potsdam particularly, the sea played a more immediate role in people’s lives. In a decade of living there, islanders had twice experienced king tides (storm surges) that had entered the settlements, but with no significant impacts. Coastal erosion at the care centres was non-existent. Floods occasionally disrupted garden production on the coastal flats, and surface water made mobility on the roads more difficult in the wet season. In the dry season, dust was more of a problem and people complained about the sand affecting their eyes. Drought is an occasional phenomenon on the Madang coast but rare on Manam itself, although it was reported for 1972, 1997/1998 and 2015. Rainfall deficits are more frequent and have made mainland agriculture more difficult; the Papua New Guinea drought of 2015 resulted in significant food shortages in the care centres, necessitating government food donation. The nearby town of Bogia is outside the cyclone belt, and no serious storms or tsunamis had been encountered in the past decade.
The greatest ecological problem that people experienced in the care centres, but primarily at Potsdam, was landslides in food gardens, since some agriculture was now being undertaken on very steep slopes in former grassland areas, and occasional rains or earthquakes could result in small landslides that damaged the farming systems. The Manam islanders were less likely to be aware of the particular techniques for countering these problems as they had seldom had to deal with them on Manam. However, underpinning every more recent environmental problem was the 2004/2005 eruption that brought to a standstill everything else in terms of livelihoods. Nothing else really mattered, in terms of environmental changes, compared with the basic impact of the displacement itself. Beyond the eruption (and occasional shortages of potable water on the island), Manam islanders had not experienced other significant environmental crises, and certainly none that required extensive external intervention.

HOUSING: SHELTER AND SETTLEMENT

Since relatively little land is available at the care centres, and every portion of arable land is being cultivated, population densities are very much higher than on Manam, and houses are very close together near the beach compared with the more scattered inland location of hamlets and homesteads on the island. This new settlement pattern has necessarily altered the “symbolics of space” that were usual in Manam villages, where the houses of leaders (M tanepoa) were often somewhat isolated from those of other villagers and much grander in size and design. The new context, in which houses are crammed together and are all somewhat similar in style, played some part in reducing the status of the leaders.

Houses are almost entirely constructed from traditional materials with wood frames, bamboo walls, black palm (limbum) floors, no doors or windows, and coconut frond roofs. Houses last for between five and twelve years. This has posed problems because of a shortage of housing materials on the land leased to the care centres and collecting timber and other materials has been an occasional source of conflict:

I can’t get materials to build a new house, he [Gabriel, one Manam] says.

The posts are slowly rotting, the walls are falling apart. The owners of the land don’t allow us to use their land to get wood or roofing.

(Waide, 2014)

Islanders must return to Manam in order to fell trees and then arrange to transport them back to the mainland for construction at the care centres. Simple repairs such as mending ladders for entry to a house are often not made because of lack of suitable timber. Sometimes replacing coconut frond roofs has required purchasing them from landowners and selling fish to generate the income to do that. Here, as in other contexts, that has resulted in the resettled populations having greater dependence on the cash economy, and hence being relatively poorer than when they were more self-sufficient living on Manam.

Moreover, as the population has grown and more families have formed, obtaining materials and finding space has become more problematic. Because of the scarcity of land and limited resources, it has become increasingly common to find two families sharing one house. Gabriel, quoted above, shared his house with his nephew. Both men had large families, but the house could not accommodate them all. This means some family members were using the veranda as sleeping quarters (Waide, 2014). Such overcrowding has welfare and health implications (see section on Health).
EDUCATION

Each of the care centres now has at least one primary school, and the teachers were said to be mainly Manam islanders. Housing is provided for them at the schools. The schools themselves are quite basic with sand floors. At least one of those in Potsdam had been constructed by Caritas Australia. Some Manam islanders in the care centres said that they preferred to send their children to schools in other villages along the north coast rather than the schools at the care centres as they thought that the instruction and facilities at these schools were better than those at the care centres. Although education is still highly valued among the Manam islanders, the high cost of school fees has meant that often it is only the children from elite families (tanepoa) that are able to send their children to school, while children of ordinary families (M gadagada) remain at home in the care centres. As there is only one school on Manam Island, many children who have returned with their parents to the island either do not go to school or must live with relatives at the care centres in order to attend school. A school had recently opened at Bieng, a former Catholic mission station on Manam near Baliu, probably by the local people, but it was not clear under whose auspices the school was started. Four New Tribes missionaries were living in Zogari village on Manam, translating the Bible into the Manam language, but they provide no instruction to the Zogari village children.

ENERGY

Before the eruption on Manam, there was no electricity in the villages, though a few families had bought solar panels for lighting needs. Cooking was done over wood fires, either inside the home in over a hearth or outside. Lighting was primarily either from firelight at night, or lanterns powered by kerosene or batteries. There was limited electricity (produced by generators) in the two mission stations at Bieng and Tabele where the elementary schools, a health clinic (Bieng) and an aid post (Tabele) were located. There is still no electricity in the care centres, hence cooking and lighting are as they were before, although people have begun to use some solar-powered lanterns rather than relying solely on batteries.

Cooking is still done over open fires, usually outside. Firewood is much more difficult to obtain than on Manam, which is favoured by currents, and a large proportion of it comes from driftwood collected along the beaches. Disputes over collecting firewood have posed problems and created tensions in the care centres.

LAND TENURE

Although the Manam resettlement took place on land that had long ago been alienated from the coastal communities for use as coconut plantations, the descendants of traditional owners have never given up their sense of ownership. That is a standard context throughout Papua New Guinea (and where descendants of landowners have often sought to rescind agreements made in much earlier “colonial” times). Thus, such landowners retained some traditional authority over that land and they had somewhat reluctantly allowed its use for care centres on the assumption that this would be temporary. With the demise of the plantation system, most assumed that it effectively reverted to them despite the Government having acquired formal ownership. Indeed, since the Government was not using that land, the former landowners therefore believed that they would, at some point, be able to use this land again.

Long-term use of the land for care centres was therefore both unanticipated and unwelcome. As one local landowner pointed out: “We initially gave this land to Europeans to be used as plantation land, and we then derived some benefits, in employment and services. We did not give this land to others simply to be occupied with no benefit to us.” The continued occupation and the lack of any sense of an end has thus concerned the local villagers, and been exacerbated at times of social conflicts and violence.

Right from the start, the host villages, although willing to allow houses to be constructed in the areas gazetted for care centres, were extremely
reluctant to provide any additional land to the settlers. Even ceding the care centre land was problem enough. In 2011, one landowner at Potsdam stated: “Manam islanders have been there since 2004. The Government told us that after five years, they would be resettled elsewhere. Since then, nothing has happened. We landowners have exhausted our land resources to cater for them, which has come with costs in terms of denial of business, social problems, loss of vernacular, ethnic problems and no services because the Government regards everyone in the area, including us landowners, as disaster-affected people” (Nalu, 2011a). Such attitudes have not fundamentally changed. Land access remains a crucial issue.

Figure 4. Mangem Care Centre

![Mangem Care Centre](Photo: John Connell © 2015)

Figure 5. Potsdam Care Centre

![Potsdam Care Centre](Photo: John Connell © 2015)
The coastal plains represented a new environment for Manam settlers, and they had to adjust their pattern of cultivation. Central to that was the need to grow crops in grasslands, rather than formerly forested areas, which was hard work for less yields due to deficiencies in soil fertility levels. On Manam, islanders said, they were used to planting three or four gardens at the same time, ensuring a continual source of food, but the limited amount of land available to them on the mainland prohibited them from doing so.

The islanders had to get used to the more pronounced seasonality of the coast: crudely, wet and dry seasons. Limited access to the bush on the mainland also reduced the quantity and type of tree crops and wild plants that could simply be gathered. Plant combinations had to change. The two main food plants are taro and yams, which have different seasons. Moreover, yams that “do not grow well on Manam and have thus never been an important part of the local diet” (Lutkehaus, 1995:49), became much more of a dietary staple. Yams are grown on stakes and require different techniques from other root crops where leaf systems are of no great importance. Grassland gardening, rare in Papua New Guinea, is relatively arduous partly because grassland gardens rarely have more than one season, so annual clearance is necessary, and because they demand hard work. Clearance is usually undertaken by men. Despite the transition to seasons, several Manam islanders claimed that they were superior gardeners than the local people since they had overcome the seasons and managed four or five food plants at any one time: “We have beaten the local landowners and taught them something they didn’t know before.”

Very little room existed in the care centres for chickens and pigs – though the Manam islanders did manage to find spaces for them – hence, these tended to be less important in diets. As important in a cultural sense was that this meant that it took rather longer to put together the pigs required for events of social significance, such as the intervillage bulleka (M) (competitive pig exchanges organized by village chiefs), hence social cohesion and social relations were changed. Coconuts, oranges and breadfruit were planted, but it has taken almost 10 years until they came to fruition, and newly planted betel nuts similarly took years to mature. The islanders living in the care centres have thus had to engage with the cash economy for subsistence foods to a substantially greater extent than on Manam itself. The highland demand for coastal betel nut has been a boon to the care centre residents, as has the fact that the centres are located along the north coast road, the conduit for the highland buyers.

Unsurprisingly, Manam islanders also regard the mainland foods and plants as inferior to their own; taro grown on the mainland was “not so good”, and breadfruit tasted worse and could not be stored (Mercer and Kelman, 2010). Cooking bananas (plantains), a staple on Manam, grow less well on the mainland. Coconuts are also seen to flourish less well on poorer mainland soils (but have also been spaced more closely because of land shortages). Sago, not greatly nutritious and not produced on Manam, became more important in diets. People perceive, almost certainly correctly, that there are more harmful beetles and other insects in mainland gardens. As one man put it: “coconuts on the island were much sweeter, fish tastes different here and betel nuts were stronger there.” While it is improbable that all foods on the mainland are inferior, it seemed that way to the displaced islanders; nonetheless, there were subtle but significant agricultural changes. Food security has been a problem, “but the government is uninterested and doesn’t care […] we have actually become an extra market for the host population.” To the extent that this is true, a shortage of land for the resettled population becomes even more problematic.

Hunting is less important than on Manam simply because of land tenure issues, but Potsdam residents claimed that they were still able to catch wild pigs intermittently, and that flying foxes could also be hunted. Again, that caused tensions with landowners (especially with regard to the feral pigs), who sometimes retaliated by firing catapults at hunters.
FISHING

While the Manam islanders have always been involved in fishing and the distinction between fishing and agriculture represented a significant gender division, with men engaged in the former and women in the latter, fishing has become much more important for the islanders living at the care centres. This change is mainly because of the lack of adequate land for agriculture and because disputes over marine tenure were less common (though there have been fights over taking coral for making lime – a crucial component in chewing betel nut – from reefs). Fishing has also become an important source of cash for villagers. In the past, men would not have sold fish on Manam; rather, they would have given any extra fish they caught to relatives and neighbours. Now, men supply their wives and daughters with fish that they then sell along the road or at small markets up and down the north coast. Nonetheless, the Manam islanders say that the fishing is inferior along the coast compared to that around Manam, perhaps because of fewer reefs, but possibly also because of the greater intensity of fishing.

WATER AND SANITATION

In the care centres, water comes from wells (as it does for nearby villages around the care centres). Wells were generally unlined and the water can be saline and brackish. Water tanks now appear to be non-existent, although some were initially provided. World Vision and the Salvation Army installed water pumps in the care centres, but these have now disintegrated. Likewise, pipes were initially used to bring additional water supplies from further inland, but these have also become broken. During the 2015 drought, serious water shortages occurred.

A number of formal long-drop toilets have been constructed in the care centres, but, as on Manam, the bush seems to be the more common location. Although this practice was seldom a sanitary issue on Manam, given the more spacious village settlement patterns and prevalence of dogs and pigs, it is not clear what implications it may have for hygiene in the care centres.

Traditionally, Manam islanders washed twice a day, first upon rising in the morning and again at the end of the day. They would bathe in the sea and then rinse off at sex-segregated water holes located on the beach. At the care centres, while children were seen being bathed at the village water well (a simple water faucet located near the side of the road), given the public location of the well and its proximity to the road, neither men nor women used it regularly.

HEALTH

The health status of villagers living along the Madang coast has never been particularly good, and the main causes of mortality have been respiratory diseases, including tuberculosis and pneumonia. Malaria has always been prevalent. Given the prevalence of island breezes, Manam was and is largely free from mosquitoes. Islanders resettled to the mainland care centres have moved into a different ecological zone, one where mosquitoes are common in low-lying occasionally swampy areas. Hence, malaria has become a problem for the relocated population, and islanders have to now use mosquito nets at night.

Relocation from Manam has taken people from an island of black sand beaches to one of white sands, and many complained that the white sand caused eye strain and other eye problems. Only one Manam man was observed wearing spectacles, although many had poor eyesight but were unable to travel to Madang and pay the substantial cost of obtaining spectacles.

In the 1970s, the nutritional status of people in the Bogia region was lower than that for the province as a whole, and there is little doubt that a substantial proportion of the population was poorly nourished. There is no reason to believe that it has subsequently changed. In contrast, the Manam islanders were relatively better off nutritionally, due to their mixed diet of fish, taro, sweet potatoes and bananas. Not infrequent buleka ceremonies and life-cycle rituals meant that villagers were also eating small portions of pork on a fairly regular basis. Now the people in the care centres seem to have acquired some of the problems endemic to the coastal and
Vegetables and other sources of protein are in short supply. Many children suffer from potbellies, while pregnant and lactating mothers eat the same food as everybody else, thereby lacking the necessary nutrients, the assessment said. Insufficient access to land and overuse of the soil have exacerbated food shortages, and families routinely skip a meal. “We survive on what little we can grow on the land around us,” Teddy Basse, a resident, said.

(IRIN, 2010)

In some care centres, diseases such as tuberculosis are the outcome of overcrowding. Tinea and colds were particularly common in the 1970s, and visual evidence suggests that remains true. HIV/AIDS is a new phenomenon, in part related to new opportunities for short-term employment at urban Madang-based industries such as the Diana tuna canning factory. In 2010, Dugulaba villagers who had recently returned to Manam experienced an outbreak of cholera, during which 15 people died. There were indications that their condition had been exacerbated by multiple micronutrient deficiencies, though malnutrition was likely absent. It was concluded that monotonous diets resulting from limited access to garden land on the mainland, and lack of income to pay for access to formal health care, were both contributing factors (Rosewell et al., 2013). Polluted water in Manam may have also played a role. Furthermore, the cholera outbreak could also be attributed to lack of access to hygiene and sanitation facilities, as most families do open defecation in the bush and sea during daytime and use bucket toilet at night. At the same time of the cholera deaths, one woman died of placenta expulsion while giving birth in the bush (ibid.), a further indication of the limited access to modern care facilities.

Ease of access to stores means that alcohol (beer) can now be more likely purchased, but there is little evidence that this is common, as much as anything because of shortage of income. By contrast, access to home-brewed alcohol (“jungle-juice”/TP jawa) is now very common, and is beginning to cause significant health (and social) problems (see section on Social Change). Marijuana too is available; one prominent Manam islander observed wryly, “We must sell marijuana and jawa to make money, even though we know it’s wrong.” Prior to evacuation, jungle juice was not prevalent on the island, though occasional beer parties were not uncommon after men returned from selling copra in Madang. Marijuana was also not widely available until the time of resettlement to the mainland.

EMPLOYMENT, INCOME AND WELL-BEING

Bogia is a very small provincial town (“station”) with few employment opportunities, hence it offers relatively little to the Potsdam IDP camp residents other than stores, the market and a health centre, and neither the Mangem
nor Asuramba IDP residences are close to employment centres, hence opportunities for wage and salary employment for care centre residents are almost non-existent. A few Manam islanders are employed, or self-employed, in Bogia, but that was true before the eruption. The visible face of unemployment is the number of youths and young men especially with little to do other than hang around, since formal employment opportunities are absent. A small number of women participate in marketing, especially in Bogia, sometimes reselling goods that have come from town, including woollen goods, but more usually selling small quantities of local produce. Betel nut and its accoutrements are also sold. At Asuramba, women also participate in small markets, selling fish, agricultural produce (bananas, sweet potatoes and taro) and such goods as three-minute noodles and batteries. It cannot be assumed that agricultural goods were otherwise often in surplus.

A substantial number of displaced islanders have migrated to Madang and elsewhere to find formal sector employment. A number of young women had moved into town to find work, especially from Mangem, the care centre closest to Madang. Many of them have found work in the local tuna canning factory, and it was suggested that a number had become pregnant, posing new problems for them as unmarried mothers.

Since economic opportunities of any kind (whether through the marketing of cash crops, full-time employment or intermittent wage labour) are scarce in and around the care centres, cash incomes are low. While the Manam islanders in the care centres may not exist in a state of absolute poverty, their material circumstances are challenging and their quality of life in terms of nutrition, health and daily life have declined from their exit of Manam Island. The visible evidence of the use of second-hand clothes and their state of disrepair, the lack of store foods (evident in the limited content and existence of care centre stores) and other commodities indicates a scarcity of cash. As one person said: “We simply don’t have enough clothes; it’s not funny.” At the same time, this part of the Madang coast has always been somewhat impoverished, and the residents who have returned to Manam Island itself appear no better off than their kin in the care centres.

TRANSPORT

The means of transport are extremely limited for the care centres, though no more so than it was on Manam. As the island had no viable roads, people either walked or travelled by canoe to visit other places on Manam. In the past, the Government operated a small copra boat between Bogia and Manam Island that transported people and copra between Manam and the mainland on a regular basis. That service ceased with the evacuation of the Manam population in 2005 and has not resumed. A new informal economy has given rise to what is locally referred to as “PMV boats”. Now privately owned 22-feet fibreglass dinghies with 40-horsepower Yamaha outboard motors can be hired for the price of fuel, or a negotiated passenger rate, to cross to and from Manam. However, access to such boats and motors are prohibitively expensive (approximately AUD 10,000; USD 8,000) by the displaced Manam islanders with low-income levels and thus highly unaffordable. Therefore, traditional single outrigger canoes and paddles are still manufactured, especially for fishing and sea transport.

At the care centres, a few vehicles are owned by residents, but many of them are in a disrepair state. A PMV (a truck or van outfitted to carry passengers) ride to Madang costs 10 kina (PGK) one way (USD 3.50, AUD 4.70), a prohibitively expensive amount for most villagers. Thus, most people walk or, if possible, travel by canoe or motorized dinghy, and travel to the capital of Madang Province infrequently.

SOCIAL CHANGE

Life was challenging for Manam islanders before the eruption in 2004/2005 as they faced increasingly limited possibilities for economic advancement on the island. However, the cost of

1 Public motor vehicle.
living was relatively low, and the quality of life was more than adequate for most villagers. Almost all families had one or more members living off the island and received some form of remittances from them to augment their subsistence-based income and sale of copra and, later, of cocoa. All of this changed with the eruption, and a new generation of Manam children have never experienced life as it was before the eruptions.

When a culture’s basis of identity is intimately tied to place, as is characteristic throughout Papua New Guinea, the untethering of society from place entails fundamental changes in cultural and ethnic identity. Most of these are at least initially negative – violence (both interethnic and domestic), drunkenness, unemployment, anomic, even rapid population growth – have all been outcomes among the Manam islanders as a result of their wholesale movement and resettlement.

Early on, it was evident that many displaced islanders in the care centres were experiencing loosely defined trauma and that trauma has persisted for some. Indeed, workers from the Archdiocese of Madang who regularly visited the camps became concerned at the number of people whose trauma needs were not being addressed. In collaboration with Caritas Australia, it initiated a trauma programme for the camp residents and brought in experienced trauma counsellors from Bougainville to develop and conduct a survey, analyse the results, assess needs and provide counselling in the camps.

In general, refugees and IDPs are almost inevitably dissatisfied with unfamiliar environments that are usually perceived as physical (climates, mountains, soils, social relations and diseases) but are also cultural and linguistic. The Manam islanders are no exception. They complained about the congestion of their new settlements, feeling now that they had become a minority in a new land that offered few options for employment and poor access to services, such that simple homesickness had become nostalgia, reducing the chances of successful adjustment to their new circumstances.

**CHANGES IN OPPORTUNITIES BASED ON GENDER AND AGE**

Among younger Manam islanders, there is some evidence of a breakdown in the role of the traditional family, with some young Manam women leaving the care centres to live in Madang where they engage in prostitution, rather than marrying Manam men, as many of them would have in the past, and settling on Manam to take care of their elders and raise a family.

Some youth did welcome the resettlement since sports facilities were superior on the mainland where flat, consolidated land existed and football and rugby could be more easily played. However, lack of formal employment – and other frustrations – have resulted in substantial manufacture and consumption of home-brew (jungle juice), especially on Sunday nights. Apart from health problems, alcohol consumption has contributed to violence, both in the care centres and between Manam islanders and their neighbours.

In the past, most young people on Manam would have been actively engaged in helping their families produce copra or cocoa; now prohibited from these activities on the mainland, crime levels have reportedly increased, as tension has built between the islanders and mainland residents. Additionally, education levels have decreased as islanders have struggled to adapt on the mainland, where resources are scarce and access to employment is difficult.

**COMMUNITY ORGANIZATIONS**

Fundamentally, with the exception of the local Catholic high school in Bogia and those few Manam Island children who attend local schools in neighbouring villages rather than the schools at their care centres, there are no shared social institutions that integrate the Manam islanders with the local villagers along the coast. The local government councils are still separated into the Iabu Local Government Council, made up of members of all three of the care centres, as well as villages on Manam and Boisa, and the Yawar and Sumgilbar local government councils, representing the coastal population.
Traditionally, inter-village marriages and ritual events brought people together from different villages on Manam, or on Manam and the mainland. Since colonial times, the predominant community organizations on Manam that brought individuals from different villages together were the schools and churches. Although the Catholic order of the Divine Word Missionaries had been on the island the longest, having first established a mission station on Manam in 1924 (Lutkehaus, 1983), in recent years there had been missionaries from a variety of denominations establishing a presence in different villages on the island, including the Wycliffe Bible Translators (otherwise known as the Summer Institute of Linguistics), Seventh-day Adventists and Four Square. At present, there are no Catholic priests on Manam, but there are four members of the New Tribes Mission living in Zogari village. Today, both the churches and the schools are localized, that is, village-based, both on Manam and in the care centres.

TRADITIONAL LEADERSHIP (TANEPOA) AND ITS AFFILIATED CULTURAL INSTITUTIONS

Provincial government leaders – such as Paul Akuram and Rudolph Mongallee – associated with the Manam Resettlement Project acknowledged the continuing role of the traditional Manam chiefs (M tanepoa labalaba “big chief” or TP kukural), a distinguishing feature of Manam culture that sets the islanders apart from the mainland cultures, which generally lack hierarchical leadership (Lutkehaus, 1995, 1983) and the need to work with them on provincial and national plans regarding Manam resettlement. However, given that the monies and the plans themselves are being generated at the national and provincial level, coordinating buy-in from the traditional Manam leaders has been difficult at times. Until recently, the Manam tanepoa had not agreed to the plan to resettle the Manam islanders at the newly bought site of Andarum further inland. At some point between 2011 and 2015, the Manam leaders (both traditional tanepoa labalaba and their elected local government councillors, who usually have tanepoa sikisiki (“little chief” status themselves) changed their position and, as Dr Boga Figa, the Director of the Manam Resettlement Programme, has acknowledged, the plan will permit them to have two Manams – the island, as well as the resettlement community at Andarum.

The Manam islanders have maintained their traditional political structure in both the resettlement centres and the rebuilt villages on Manam – by having the tanepoa labalaba (big chief) in charge of the larger care centre settlement and a tanepoa sikisiki (little chief) overseeing the settlement on Manam. However, the move to the mainland has weakened traditional leadership to some extent, in that leaders exert less social control over residents of the care centres than they did over villagers on the island. This is especially true with regard to the behaviour of young men and drinking, and, to a lesser extent, young women and their illicit sexual activities.

Although organizing critical social events, such as the inter-village buleka, is more difficult, simply because obtaining the necessary material inputs (notably pigs and galip nuts) has been more difficult, in recent years (from 2011 on), there has been a revival of these inter-village events among neighbouring villages in the care centres.

Another indication of the gradual revival of traditional cultural practices is the construction of new men’s houses (M keda, TP haus tambaran) in some of the care centres, a significant element in the establishment of the authority of the village tanepoa (Lutkehaus, 1995). Although the flutes (TP tambaran) may no longer be played in some villages due to the lack of men who still know how to play them, in other villages, they continue to be performed. To what extent this traditional practice will be revived or continued, only time will tell, but even in those villages that have ceased to perform them, there is an interest in reviving the practice through the use of tape recorded and digitized recordings of past performances. At some level, it seems that the gradual realization, after 10 years on the mainland, that the lack of modern economic opportunities and of any significant change in social and economic status, has resulted in those islanders who cannot
leave the centres shifting focus to reviving their traditional cultural practices.

Whether this revival extends to their relations with their mainland taoa partners is a different, and unanswered question. These relationships may have become less important in a monetized and materialistic context in which the Manam islanders are already on the mainland, and therefore in less need of their taoa partners and what potential security and hospitality they had to offer in the past. Taoa partnerships have, in any case, become strained after a decade of resettlement.

MATERIAL CULTURE

Loss of distinctive aspects of material culture is far from unusual in Papua New Guinea, and Manam is no exception. This process has been hastened by migration to the mainland; however, key elements of material culture, such as the large slit drums (TP garamut) associated with the authority of the tanepoa, were transported from Manam to the mainland. Other significant items of material culture, such as hand drums, carved wooden masks and bamboo flutes, again, associated either with the tanepoa or with the spirits of the ancestors, have gradually made their way across to the mainland and can be found in many of the villages, tucked away for use on ceremonial occasions.

Utilitarian objects, such as canoe paddles, were observed being made by villagers. The construction of new canoes is more difficult due to the lack of appropriate-sized logs. However, such logs can still be found on Manam itself and also appear on the beaches, as they did in the past, where they were washed ashore from the Sepik River during the rainy season.

CASH ECONOMY VERSUS GIFT EXCHANGE

Money is more necessary on the mainland than it was on Manam. As villagers in the care centres said: “Now it is hard; we do not share and exchange as much as we used to do.” As mentioned earlier, this is particularly true with fish as they have become an important commodity for sale along the road and at local markets. Card playing and gambling have become more common, both among men and women. Gambling was seen by some as a means of generating cash income, but this is a zero-sum game.

CONFLICT

Unfortunately, as the time in the “temporary” care centres dragged on, it became apparent to the Manam islanders as it soon became to others, that the surrounding villages were no longer particularly welcoming. Indeed the notion of host villages quickly became ironic. By June 2005, it was “already evident that the stay of the Manam islanders in the care centres was causing tension with local communities over land use issues” (OHCHR, 2011:13). In 2006, villages near Asuramba had asked their MP to evict the Manam islanders because of security concerns (ibid.). In 2007, it was simply noted by one observer that a major “threat” in Asuramba were the landowners hence the Manam settlers were “planning a fight to claim more land as [they] have given up on the government” (Mercer and Kelman, 2010:419). By the time that statement was in print, major fights had occurred. A clash at Tobenam in 2008 left the centre burned to the ground and two people dead.

Social unrest was common, both among the Manam islanders themselves and between the settlers and the host villagers. More concentrated settlement, inadequate access to land and lack of resources created problems. It has been suggested that “one serious error of judgement included the placement of warring villages in the same care centres on the mainland thereby contributing to increased tensions and fighting” (Mercer and Kelman, 2010:418). While the villages were regrouped in the care centres according to their geographical location on Manam and residential densities were much higher, it is not clear how such problems might easily have been avoided. Again, this may be a worst-case scenario, since there was little evidence of warring villages on Manam prior to the eruption, and it has rarely been commented upon subsequently.
The significant conflicts were those between Manam islanders and the host villagers who had traditional ownership rights to the plantation lands. Despite the existence of taoa, there had often been tensions between Manam islanders and mainlanders; as one prominent local landowner said of the islanders: “They were always a proud lot. They would drive by drunk after selling cocoa. We didn’t mix with them. Unfortunately, they did not leave their aggressiveness behind them – they brought it with them.” A Nubia kukurai commented pointedly that:

[Some landowners’ children, girls and women get harassed by the displaced Manam islanders. They make gardens further into other traditional land and get aggressive when it’s pointed out to them politely. Some of them tend to think that they have some kind of special government powers and are a law unto themselves which enables them to do whatever they want, even illegal activities like homebrew, selling black market beer, creating social problems, defacing our sacred places, chopping down coconuts trees, harvesting our coconuts for copra and other undesirable activities. This sort of attitude and other associated matters may have attributed to the clashes and recent killings in the care centres.

– Quoted in Nalu, 2011b

While conflicts often had a particular cause – encroachment on land, chopping down valuable trees, taking firewood from the wrong place, sexual relationships between youths, and so on – in many respects, as one local landowner phrased it: “the longer you stay together, a small issue becomes a big issue.” Manam islanders had simply overstayed their welcome, and that welcome had never been effusive. Disputes increased and flared over a number of issues and in extreme cases, notably around Asuramba, resulted in pitched battles between settlers and local people, a number of deaths and the eventual eviction.

In 2009, there were renewed outbursts, after which many Manam islanders returned to Manam, with considerable encouragement from the Government. In mid-2009, six Bogia men were arrested after a Manam woman was bashed and her three-year old daughter beheaded. In one of the most horrific cases, a Manam islander was chopped into pieces and his body parts placed in a bucket, while several of the islanders’ houses were burned. By July in the same year, it was estimated that eight people at Bom had been killed, as well as a child at Asuramba. The mainland Suaru village was burned down in retaliation. Some local landowners had ulterior motives. Those at Suaru, near where a small number of people from Baliau had settled at the nearby Bom plantation, anticipated that islanders would only stay for six months and that it might prove the catalyst for what had been an abandoned and rundown plantation to be redeveloped for their own benefit. That proved wrong on both counts. The violence was such that the Baliau tanepoa called on his Manam compatriots from the villages in the other two care centres to send warriors to assist them in the fighting, while the mainland villagers also called on traditional allies.
for support. These conflicts, which were said to resemble pitched battles at times, with Baliau calling on Boisa people for support, were by far the most serious ever and resulted in some formal court procedures.

In response, the provincial authorities in Bogia insisted that the islanders involved in the violence be repatriated to Manam (although blame was not necessarily attributed solely to the Manam population). At the urging of the Madang Provincial Government, the Baliau chief (tanepoa), agreed to take the entire village population back to Manam, where they resettled at their traditional village site, even though the Government provided no facilities to the islanders for education, health, transportation to and from the mainland or anything else. After the fatal clashes in 2009, the police were said to have evicted “more than 2,000” people who returned to Manam while the care centre at Bom was burned down to prevent them returning to the mainland (OHCHR, 2011:14). Exactly how many people then returned to Manam is unclear.

In 2010, a fight between two high school students escalated into a brawl in which one man was stabbed to death. In the same year, despite the invocations of provincial peacekeepers after a local woman was killed during a fight at Tobenam, further violence led to the death of two more people, one on each side, and more crops and houses were destroyed. Weapons in these fights were confined to bows and arrows, axes and catapults with stones, rather than guns. Reports say a mob of 500 people then set upon the care centre, burning 160 homes, killing animals and destroying food gardens. This conflict led to the removal of the Manam islanders at Tobenam, sending them back to Dugulaba village on Manam. Since then, women and girls at the Mangem Care Centre have reported feeling unsafe there and are afraid to tend their gardens alone for fear of attack or to walk to the local health centre for assistance (IRIN, 2010; OHCHR, 2011:14).

Nonetheless, social relations between settlers and surrounding villages have not been universally bad. At Potsdam, there were fewer of the problems evident around the Asuramba and Mangem centres. There has been some intermarriage between the settlers and hosts, but formal ties and joint activities between islanders and mainlanders are largely absent.

RETURNING HOME?

One way that Manam islanders adapted to the difficulties and marginal situation in the care centres was to return to Manam periodically, to produce copra in order to obtain cash or cultivate new gardens, as they had no permanent rights to garden land on the mainland. They also returned to Manam to gather timber and other materials for the construction of houses at the care centres since they also had no rights to large trees on the mainland. The fuel costs of this could be expensive. On the trip back and forth between the mainland and Manam, they troll for fish, again because they had no official use rights to the coastal waters near the three care centres. Mangem and Asuramba, much further from Manam, benefited least from the ability to return.

Earlier on, in mid-2005, chiefs sent selected young men back to Manam – about seven to each village – to act as “caretakers”, establish a presence, provide security, and do what they could to restore houses and gardens. Some Manam leaders, such as the tanepoa labalaba of Zogari village, decided to have some villagers return to live permanently on Manam. This arrangement helped to alleviate overcrowding in the care centre and provide villagers on Manam who could tend to cash crop production (such as making copra and harvesting betel nuts). Thus, the chief’s son and his uncle – a man about his own age, in his early forties – along with other villagers, began to rebuild homesteads in Zogari, replant gardens and key trees such as canarium almond (galip) and betel nut (TP buai), raise pigs and protect these resources from predators from other villages.

Most islanders believe that it is important for their deceased relatives to be buried on Manam, hence the bodies of Manam islanders who have died since 2005 have been taken back for burial. It is important not only for the dead but for their living descendants that the souls of the deceased reside on Manam (Lutkehaus, forthcoming). Indeed, islanders are discouraged from burying
their dead on the mainland. Zogari villagers staged an elaborate mortuary ceremony in 2011 honouring their deceased tanepoa labalaba, an event that had been postponed for many years because of their displacement to the mainland after the eruption. Typically, households related to the dead person are encouraged to pay PGK 2 each to cover the costs of transport to the island. Some burials are funded by leaders. In one or two rare cases, islanders have been buried on the mainland at a village where they have kinship connections.

In some respects, returning home temporarily was simply a useful means of acquiring certain goods, but it was also a journey of considerable social significance (evident in burials) and a means of both checking on the welfare of those people who had returned and a basic expression that Manam was still home. Indeed, over time, it was suggested that there was a gradual increase in the frequency of return visits to Manam both to collect garden produce and timber, and simply to assert traditional social ties and retain a sense of ownership.

ONWARD MIGRATION

At the same time as Manam islanders have maintained their connections with the island, resettlement has also acted as a catalyst for migration to other parts of Papua New Guinea, especially to Madang town. Given the limited range of opportunities for advancement on Manam Island, migration off the island has always been true to some extent; however, the displacement caused by the 2004/2005 evacuations has accelerated this movement.

A substantial number of islanders, especially of tanepoa status, have gone on to the Divine Word University in Madang, as well as the University of Papua New Guinea. Others have acquired technical jobs in the mining and finance industries, in the military, and elsewhere. Some have migrated permanently overseas. At least one Manam woman lives in Australia with her Swiss husband, and another Manam man has brought his parents to Washington, D.C., where he works for the Papua New Guinea Embassy. His children are now citizens of the United States. Many Manam islanders have increasingly spent time in Europe, the United States, China, Japan and South-East Asia as a result of their employment, thus bringing a new understanding of the global context in which Manam islanders are embedded. Others have moved closer to home, relocating to Wewak in the East Sepik Province and to nearby islands such as Kadowar in the Schouten Archipelago.

Many younger Manam islanders are held together tenuously by social media, such as Facebook and LinkedIn. Thus, a much more dispersed and fragmented society has emerged, tied ever more loosely to Manam itself, but a population that is anxious nonetheless to keep in touch and exert its identity and rights to land.

CONCLUSION

It is inevitable that a population resettled in circumstances not of their own choice, and with little autonomy and authority to ameliorate this situation, perceives resettlement to have been a disaster. In some respects, this perception is true and most obvious in the violence that has ensued. Nonetheless, there have been some small advantages from resettlement, notably in the greater connectivity with “modern” Papua New Guinea, as there is superior access, and more PMVs to take people, to the capital Madang (and the employment possibilities and health systems that exist there). However, few displaced islanders have the resources to easily afford such choices, thus, overall, from their point of view, their quality of life has declined with resettlement and relative deprivation.

Resettlement on narrow strips of coastal land created conflicts with the local people over the use of resources, such as land for gardening, water, materials to build houses and access to marine resources, circumstances that continue to challenge attempts towards food security. Social relations with nearby host villages, the traditional owners of the land on which Manam islanders had settled, and their neighbours, gradually disintegrated.
Resettlement led to a breakdown in regional exchange relations that were traditionally based on local ecological differences and the complementarity of reciprocal needs. The more far-reaching implication of this rupture has been a breakdown in the traditional form of regional integration of which the Manam were an integral part. Since the Manam islanders have become the dependent group within the local exchange economy, and since they can no longer provide their traditional items of exchange – pigs and galip nuts – they are at a disadvantage within the regional exchange economy. Awareness of their precarious and disadvantaged position has led the Manam, a proud and self-reliant island people, to be quick to fight to assert their dominance. In ecosystemic terms, it has meant the hastening of the breakdown of a regional system of interrelationships that had already felt the inroads of modernity. It also added to the insecurity and frustration that Manam islanders felt in terms of a long-term solution to their needs. Although there is some indication that aspects of this imbalance may be changing, as the Manam islanders have begun to raise a surplus of pigs and produce baskets of galip nuts, the question remains as to whether or not the preceding 10 years of inequality in this relationship can be reversed.

Some of those who went back early on to Manam did so because they were more easily able to cope with the threat of volcanic activity on the island than with the food problems experienced in the care centres as a result of infertile soil, different crops and cultivation techniques. While that appears an extreme perspective, as food was provided to the care centres by the Government and NGOs such as World Vision, to tide people over the difficult early months, this assistance has long since ended. As the years have dragged on, life in the care centres has become more difficult as gardens are less productive and families continue to increase in size. While re-establishing livelihoods on the island so soon after the eruptions was particularly difficult, despite the efforts of the caretaker populations, the restoration of Manam became easier over time, conflicts on the mainland increased and Manam provided possibilities for making copra and gaining some cash income. Thus, overall, resettlement has not been a beneficial experience for the Manam islanders. Most have been living in the care centres for a decade and have grown ever more impatient for change. Others want some recompense for their problems there: “Will the government compensate us for the deaths and illnesses in the care centres?” Above all, after a decade on the mainland, there is still enormous uncertainty about when durable solutions to the situation will be initiated. This uncertainty has proven to be extremely difficult to cope with. Unfortunately, any reconsideration of options appears to have been largely closed off.

At the provincial level, it was repeatedly pointed out, in the words of the Madang Province District Administrator Daniel Aloi, that the last thing the Manam islanders want is “to be continuously researched, to be asked and to be continuously asked”. The islanders themselves were of rather similar opinions. As the chairman of the Iabu LLGC, Martin Ururu, pointed out: “We have been asked the same questions over and over again. When will we get a report and what will we get out of this?” Another queried: “How many forms must we fill in before something happens; how many of the same questions just come up again and again?” Survey fatigue was evident. Ironically, however, it was impossible to determine what and where were the results of previous research on the aspirations of Manam settlers, despite the fact that Daniel Aloi argued that “all” Manam islanders and kukurais had agreed to the idea of resettlement in Andarum, with minority disagreement. At the same time, as both Daniel Aloi and Dr Boga Figa – the head of the Manam Resettlement Programme – pointed out, the issue of resettlement has become a “touchy concern” since “we [the provincial government] have procrastinated over time” and that has been contentious for both host communities and Manam settlers. The issue of resettlement is thus thoroughly embedded in local, provincial and national politics.
Manam islanders, both on Manam and on the mainland, constantly stated resignedly: “This government has given more attention to the asylum seekers on Manus than us – the Papua New Guinean people – they have had a better deal than us”; “the government is not looking after us compared with the asylum seekers on Manus.” Frustration was ubiquitous. That has been a recurrent scheme. In 2014 at Asuramba, a former Manam local-level government councillor, Charles Yanda, argued: “We are a forgotten people. If the government can look at foreign asylum seekers, why not pay attention to our needs. We’re Papua New Guineans and we’ve been here for 10 years” (Waide, 2014). As another Manam islander said: “Perhaps we will just wait for one country to take us.”

Commonly, it was said: “People have died here already and children have been born; how long must it take?” and equally frequently: “We cannot worry about the old people anymore; they have no future anywhere but what about the children: they must have a proper future.” “What policy? We’ll be dead before the government implements any policy. Every time we hear the word policy, we ask how long? We are dying. When are you people going to come and help us?” “You have a three year programme; we are talking about weeks and months; our trees have already grown up here.” After the 2015 drought, when two people died in the care centres allegedly from food shortages, such issues were reiterated more vehemently.

With a growing population, it is simply not possible for Manam islanders to remain in any sense sustainably in the coastal centres, especially as that land becomes depleted of nutrients or under pressure for alternative uses, and host populations also grow. A number of possible options exist, such as the following: (a) resettlement at Andarum and abandonment of care centres; (b) return to Manam Island and abandonment of both Andarum and the care centres; and (c) diverse solution that includes elements of two or three different options. These possibilities are discussed in detail in the following sections of the report.

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2 In reference to the three-year MECLEP programme in whose framework this study was conducted: [http://environmentalmigration.iom.int/migration-environment-and-climate-change-evidence-policy-meclep](http://environmentalmigration.iom.int/migration-environment-and-climate-change-evidence-policy-meclep). The planned household survey could, among other reasons, not be conducted due to the survey fatigue expressed during a field visit in May 2015 and security issues.
View of the volcano of Manam island from the mainland. Photo: Muse Mohammed. IOM © 2016
4. Andarum: A new Manam?

Resettlement at Andarum is non-negotiable – people have come to accept this – the only problem is we have no money.

– Paul Akuram
Subdistrict Director, Manam Resettlement Project

Since the Government of Papua New Guinea never officially allowed the Manam population to return to the island, and has repeatedly declared that Manam is unsafe, and since both the host villages and the Manam islanders were impatient for a solution, the Government has had to develop a resettlement plan for the islanders. It was not until 2006 that a Manam Resettlement Authority (MRA) was constituted and charged with developing a resettlement plan for the Manam islanders.

That took many years. The authority functioned poorly and was beset with problems relating to the use of funds, ongoing land disputes at the existing care centres, the limited availability of coastal land (and a perception by some prominent individuals that coastal land on which the Manam islanders now reside constitutes prime real estate for tourist development). As a result, land was sought throughout much of the general coastal area of Madang, from the mouth of the Ramu River, gradually moving southwards to Andarum. The national government’s current plan is to resettle the Manam islanders inland in the foothills of the Prince Alexander mountains in the Andarum census area directly to the south of Bogia. Only after almost a decade since the eruptions was a site finally chosen and agreed upon for use as a resettlement site.

As recent as 2013, the selection of the site, which was proposed as early as 2006, was certain. As Paul Akuram pointed out:

Negotiations for the proposed site for resettlement in the Andarum census division were completed. Villages in Andarum including Sokmun, Raptuk, Itutan and Yangrit gave land for resettling the people of Manam Island. A survey was carried out to ensure the place is suitable.
The Andarum people were however particularly enthusiastic to release land on the grounds that this would enable them to open up their own, otherwise remote, land via a new road, have better access to services, and be able to produce and market cash crops. The landowners amount to about 1,260 people, most of whom are young.

Should this site development go ahead, it is also possible that the small Boisa population might also become part of a planned resettlement. They are taoa with the Baliau villagers and also need an alternative home since their population is declining and maintaining livelihoods on very rocky ground is particularly difficult (“plants must be grown in holes in the rocks”).

Beyond the actual choice of a site, there have been few recent examples in Papua New Guinea of resettlement, and older examples have been linked to large-scale projects such as oil palm development rather than with resettling victims of natural hazards. Most incidences of resettlement in Papua New Guinea were undertaken in the late colonial era (Hulme, 1982) and have limited relevance to contemporary circumstances. For the Manam resettlement plan, the provincial government was more or less starting from scratch.

A Manam Resettlement Act was passed by Parliament in 2006, to source funds and assist with the relocation process. The act expired in 2011, and resettlement has remained in limbo. The MRA eventually drafted a new act that has been referred to the National Executive Council to be brought to Parliament. The Manam Resettlement Authority Bill was passed in April 2016. The Manam Resettlement Project was allocated PGK 3 million in the 2013 national budget, but that has been exhausted. All those associated with the project agree that this has been a disheartening beginning. Although a site has been chosen, the lack of funds has meant that no progress has been made in acquiring the actual site, let alone establishing a settlement scheme.

**THE SITE AND SERVICES**

The chosen site at Andarum covers 60,000 ha, and the proposal is for the outright purchase of 10,000 ha (rather more than the 7,500 ha of Manam, of which only 30% is useful). The site is effectively virgin forest, accessible by river from Bunapas, 30 km away, or after a three-hour walk from Barit on the Ariangon road (a road that is sometimes impassable in the wet season). Currently, it is therefore extremely inaccessible. To develop the site requires the establishment of formal agreements with the landowners, and also with the landowners of the access routes by river and/or by land. Such agreements are yet to be formally concluded, though discussions have been initiated.

Given the significant area of land for resettlement, the assumption is that there would be enough land for subsistence gardens and for cash cropping centred on cocoa. (An optimistic assumption is that this would lead at some unspecified point to each of 5,000 households having 1 ha of cocoa and thus producing 5,000 t annually, so earning PGK 30 million, and thus enabling self-reliance.) It was also assumed that some additional income would be generated from fish ponds, selected timber harvesting (and possible balsa planting), while health and education services would be established alongside projects involving youth and women. There has also been some consideration of establishing an oil palm plantation in the region, providing jobs for both settlers and landowners. It was further anticipated that there would be a small township, with such facilities as a school and a health centre, surrounded by villages located with some reference to their location on Manam. Such an integrated package sounds promising on paper.

The original proposal set 2013 for the establishment of the first component – the establishment of a secretariat base at three sites: Bogia, Daigul and Raptuk (the logic for such a trilogy was unstated), followed by the conclusion of peace and reconciliation issues (with the host villages at each of the care centres) and the purchase of the land. A year later would come a full feasibility study and basic site preparations. Feasibility studies were initiated in October 2015.
The cost estimates, developed in 2013, indicate the extremely high cost of implementing the proposal. To get the basic project underway with expenditure on personnel and administration, basic field operations, feasibility studies and land surveys, plant and transport (from tractors to dinghies and a site airstrip) and basic project buildings, was estimated at PGK 15 million. That excludes the subsequent cost of road construction, clearing the site, and building houses and other infrastructure. Not only would that almost certainly be very much more than PGK 15 million, it would involve several years of work. It was stated that the World Bank had estimated in 2007 that the whole project would cost USD 860 million (but the statement could not be sourced). Were this a private sector project (such as a mine, where the returns are substantial), crude estimates suggest that it would take three or four years at least before a single household could be relocated, but a public sector project it is likely to take rather longer. Minimally, it is unlikely that households could be relocated within five years of the initiation of the project, and that remains indeterminate. Boga Figa has estimated that the entire project will take close to 20 years to complete. If oil palm or timber was being developed in adjacent areas that might hasten the scheme, result in adequate access road construction and give it a greater chance of success. Indeed, there appear few examples of substantial and comparable public sector projects in Papua New Guinea, and some local memories of the government’s attempt in the 1980s to develop a substantial cattle ranch inland from Bogia that eventually collapsed in some disarray over issues of land tenure and the “eating” of profits. That suggests that not only is there a shortage of public finance, but there is also a shortage of skilled human resources to commit to these objectives.

THE ISSUES

Officially, the majority of Manam islanders are said to be in favour of a move to Andarum, based on the large amount of flat land that has been made available (or at least promised). Such a move would entail an enormous transformation in Manam culture. Not only would islanders be further removed from their island, and from where it would finally be invisible, they would also have been removed from their traditional means of livelihood – the sea – since the Manam have always been gardeners, as well as fishermen and sailors. Although it has been many years since the Manam constructed their large overseas sailing canoes (Wedgwood, 1934) and embarked on extended voyages to the coast and other islands to exchange baskets of galip nuts and pigs for sago, slit drums, pandanus skirts, bamboo flutes and other ritual paraphernalia, the construction of small outrigger canoes for reef and deep-sea fishing, spearfishing and trips to exchange with coastal exchange partners has remained vital to maintaining both the Manam diet and their ceremonial life (Lutkehaus, 1995). Indeed, the Manam islanders in the care centres, with limited land for food crops and no land for cash crops, have effectively become more oriented to the sea. As they pointed out, at least at Potsdam: “Unlike the land, we do not experience such problems with marine tenure and fishing has been relatively straightforward.” Ironically, therefore, people who have now become more attuned to marine subsistence would effectively have to revert to an agricultural lifestyle, and in a context where the physical environment is quite different from that on Manam. A culture that has traditionally been oriented towards subsisting on a mixed economy of gardening and fishing, with a gendered division of labour in which women are primarily gardeners and men involved with fishing, the change to a non-marine-based economy will mean fundamental changes in diet, gender relations and men’s roles in society. Perhaps, as Dr Boga Figa has suggested, “[p]eople can adjust to no fishing just as urban migrants do”, but urban migrants have made that choice freely, or, as Paul Akuram has said: “They have to adapt and be part of the people in that area.” The cost of such a change will weigh heaviest on men, both young and old, the gender that has already suffered the most in term of loss of prestige in both the traditional as well as the modern sectors of life in the care centres.

Not only the physical but also the cultural landscape is different in Andarum, and many Manam islanders are concerned about sorcery; the reputation of inland areas, most notably
Andarum: A new Manam?

Tangu and Almami, for sorcery is considerable and ongoing fears exist (Burridge, 1960). Indeed the people of the Murik lakes, trading partners of the Manam and 50 km to the west, fear resettlement inland for the same reasons, and point to a spate of death among resettled Manam islanders as being the outcome of sorcery cast by the hereditary landowners (Lipset, 2013). The Andarum people also have a matrilineal descent system, rare in Papua New Guinea, and quite different from the patrilineal system of Manam; as Boga Figa observed, “It will be a culture shock, but they know that.”

Nonetheless, moving inland is a change that some Manam islanders are willing to make, insisting that they do not want to return to the island (Aihi, 2009). That is an unusually unequivocal position but, for those who hold it, it is at least in some part the outcome of 10 years of non-existent progress. Indeed, it appears to offer a greater finality than any other possibility, and it is the only formal proposal. Interestingly, when Lutkehaus discussed this proposal with people at Potsdam in June 2011, the islanders dismissed the plan as meaningless, since there was no road access to the site. They said that they had heard all of this before, did not expect a genuine plan, and were still waiting for something to happen.

Once again Manam islanders’ perceptions of what might happen are varied. There are current indications that many islanders are still unenthusiastic about moving inland and that many, probably most, are uncertain about the best outcome. Yet for other islanders, the role that Manam Island – the land and the surrounding sea – plays in their spiritual and cultural life is more important to them than the promise of land inland or the threat of the volcano (see section 5). Others would prefer a coastal location, with some accessibility, essentially a care centre location but without the land tenure issues and conflicts. In Papua New Guinea, that outcome is not easy to achieve, especially when coastal land can be coveted.

Relocation is embedded in politics at the national level. The move to Andarum was initially supported by the MP for Bogia, John Hickey, whose constituency covers Manam. Some islanders believed that his primary goal was to establish an oil palm plantation at Andarum, where the Manam islanders would be a handy source of labour. Others suspected that access to Andarum would be the cue for a large timber company like Rimbunan Hijau, or an oil palm company, to move in in a similar way, and that this would provide personal benefits, while government funds would be used to clear the road, and so provide necessary infrastructure for either project. However, Hickey later lost interest in Andarum when it became clear to him that “fish from the saltwater [the Manam islanders] don’t like the cold water of the bush”. In 2014, he stated that there had been a lack of consultation with the islanders, and that there had been no sign that the national government was committed to the cost of relocation that he estimated at PGK 700 million (Post Courier, 2014). At that point, Hickey became more interested in encouraging the Manam population to return to Manam. Today, Hickey’s status is at best uncertain. In March 2015, he was arrested in Port Moresby and charged by the police fraud squad for three counts of official corruption, abuse of office, and misappropriation involving nearly PGK 700,000.

Scepticism over the Andarum plan remains considerable. People are conscious that politicians have vested interests and change their minds frequently: “the government has a five year plan and then the government changes and then it starts all over again” and, at the same time “which government [provincial or national] is actually looking after us? We are never sure.” Critically, all plans for change have been mired in controversy and intrigue, and above all uncertainty. Indeed, one of its most ardent proponents has said: “It is not ideal but what people have two homes?”

THE CHALLENGES

The greatest problems concerning the development of Andarum concern time, land and money: first, the very long time (and cost) that will be required to get the project underway and get even some households to the site. There is presently no sign of the money required becoming available. Second, should the project become successful, there is the long-term
possibility that the present landowners (or their descendants) will one day seek to reclaim land that they might argue to have been leased rather than sold – the analogy of the present situation in the care centres – and that after development has become more valuable. At the moment, the project is stalled.

The development of Andarum is further complicated, not just by the different attitudes and approaches of politicians and governments and their fluctuations, but also by the different attitudes towards resettlement of the Manam people over time. There is no consensus among different villages, let alone different individuals, on whether they should return to Manam or resettle somewhere on the mainland, and if so where. In the aftermath of the volcanic eruptions, Manam society has become divided in the search for new residential solutions, exemplifying how people will make a range of choices and decisions, and how these choices may change over time.

Displacement may be a catalyst for change, even a catalyst for upward mobility. Indeed, some now see Manam as a rather small and remote island with inadequate access to services in a country where service provision in remote areas is contracting rather than expanding. Such significant decisions on crucial issues were never needed in the past, local leaders were not always consulted, and the parameters of decision-making were rarely clear. As is suggested (section 6), in the long run it may well be that the most effective adaptive strategy is not to have one outcome but to develop diverse responses to achieving flexible livelihoods, that might meet the needs of a now more diverse Manam society. Andarum may be part – but perhaps only part – of the most effective resettlement plan.

One blog from an international observer from the Internal Displacement Monitoring Centre in 2014 concluded:

In terms of the Andarum relocation project, political differences at the district and provincial level should be resolved and technical capacity increased at the coordination level to ensure the smooth and timely relocation of the displaced people.

(Kok, 2014)

This statement and others optimistically belie the reality that, without adequate funds and in the face of complex challenges to coordination and management, the enormity of the task largely guarantees that a solution will neither be “smooth” nor “timely”, hence interim strategies are likely to be required.
Zogari village beach, Manam Island.
Photo: John Connell © 2015
5. Back to Baliau: A Manam alternative?

It’s hard work, but it’s home.

– Zogari villager

The Government of Papua New Guinea has consistently maintained the position that Manam should not be re-inhabited because of the danger of future, perhaps even more catastrophic, eruptions. It remains a disaster zone so that people travelling to the island or staying there do so at their own risk. The Government is dependent on the knowledge and advice of volcanologists at the Rabaul Volcanological Observatory (RVO) concerning whether or not to officially return the population to the island. The Government of Papua New Guinea does not therefore provide services, such as transportation, health or education, to the hundreds of Manam islanders who have returned to live on the island, many at the provincial government’s request. That is a disincentive for others to return. Two significant eruptions since 2004 are further disincentives.

Both the national and provincial governments have acknowledged the reality that people have returned, despite volcanic activity threatening their safety. The RVO and the Government are in difficult positions. The volcanologists prefer to err on the side of caution, which has led the Government to seek permanent resettlement on the mainland. However, the Government has never officially prohibited people from returning to the island. Indeed, in the case of the Baliau villagers, the Madang Provincial Government facilitated what they said would be a temporary return to the island in order to quell the violence that had broken out between the Baliau villagers and local mainland communities.

At one point, the provincial government even advocated that the entire population return until the islanders could be properly relocated (Evara, 2010). They have, however, also indicated that once the Manam islanders have been resettled and given access to land at Andarum, they will also maintain their traditional rights to their land on Manam. Manam islanders would have rejected anything less. This is extremely important since, although the land at Andarum will be purchased, residual claims to the land are likely to exist. In this sense, short of any explosive disappearance, Manam Island will never be abandoned.

It is evident from the above that, not surprisingly, like other Papua New Guineans and displaced populations more generally, the Manam islanders retain a strong attachment to their home island, perhaps most evident in burial practices. Most have returned at some point, and some have returned permanently despite the lack of services. Moreover, even at the height of the 2004/2005 eruptions, a handful of people – perhaps as many as a hundred – chose to remain on the island; the majority of these were at Baliau, farthest from the eruptions, but a handful even remained at Warisi and Bokure. One man from Madauri famously described being the lone person to remain on that part of the island, acquiring a pack of 57 dogs left behind. Remaining was particularly dangerous if eruptions occurred at night. Clearly, many people preferred, and continue to prefer, to live on Manam even in the most difficult and threatening of circumstances.
Equally, resettlement has been so frustrating, difficult and divisive that some Manam islanders returned even while the volcano remained reasonably active, with ash falls damaging food gardens and polluting water supplies. They believed that they were better able to cope with the impact of ongoing volcanic activity than the effects of food shortages and social tensions in and around the care centres. Return has occurred for various reasons.

**RESTORATION**

After the violent eruptions of 2004/2005, the situation on Manam returned towards normalcy. Water supplies (from wells constructed close to beaches) were no longer polluted, vegetation reappeared on trees, gardens could be redeveloped by digging through the ash, and betel palms replanted. That was reported to be relatively easy – but hard work regardless – in the north and west of the island but even more difficult in the south and east where the ash falls had been much deeper. Villagers from the north and west were more likely to have returned. Normalcy still meant that light dust and ash falls were not unusual, the fertility of the soil was limited (because of its porosity), and the possibility of another substantial eruption was always present.

A few households began to return to the island by the end of 2005, but a trickle became a flow within about three years, as rehabilitation of gardens was shown to work, and trees and coconut palms gradually came back into production. Return dramatically increased after the conflicts on the mainland. Social factors also played a part: “Care centre life was hard; we felt we were inside a fence and freedom was restricted; here we have freedom”; “The landowners’ customs are not the same as ours; we share, we work together, we build our houses collectively.”

More people have returned to Baliau than to any other village. The majority of the Baliau population, a village of 1,000 people, returned after the 2009 conflicts around Asuramba. The Baliau tanepoa asked for assistance and the provincial governor of Madang sent a barge to assist in the resettlement. No other government assistance was forthcoming, and it took about a year for the returnees to establish viable agricultural systems. At least as many have returned to other villages on Manam, not as villages escaping violence, but as individual households, when they simply tired of living in the care centres. However, the district government requested that a portion of the population from Dugulaba also return to the island because of the mainland violence.

While the catalyst for return to Baliau was the violence and fatalities on the mainland, it is not coincidental that Baliau is on what is usually the safest part of the island, distant from critical lava and pyroclastic flows. Indeed, one of the Manam chiefs had returned there within a couple of months of the eruption. More generally, people have returned to the safest villages. However, no village can ever be entirely “safe”, and Baliau was one of those most affected in the 2015 eruption. Those people who returned to Zogari stressed the better access to land and their view that it was healthier and cheaper on the island: “Everything is free here”, “It’s hard work but it’s home.” At the same time, continuing to plant new gardens as subsistence cycles required was demanding: “We are sick from the hard work.” Many of the returnees found it “too hard to buy things in Potsdam”. Moreover, the “sea is clean and the fish are sweeter” near Manam. Such attitudes applied not just to those in Zogari but also to those who had returned to Baliau and elsewhere.

It is difficult to estimate how many islanders have returned to Manam. In 2007, it was estimated that some 297 villagers had returned permanently to Baliau, the largest village, and that a further 100 Baliau villagers remained at the Asuramba care centre (Mercer and Kelman, 2010:413). Since the Baliau population was at least twice that combined figure, these totals are doubtful. In the subsequent eight years, Baliau has grown further than that through return migration and population increase. In 2014, there were at least 24 households in Baliau and 10 in Dugulaba, but there were plenty of other households elsewhere on the island. Most were nuclear households, but a number of widows and widowers had returned. Baliau is the largest “new” village on the island. Perhaps a quarter of the population of Boda have
also returned. Zogari is substantial (but less than 100), and other villages on the west coast such as Waia and Madauri are little more than mere clusters of a few houses, perhaps 25 households in all. Madauri villagers have colonized the former Tabele Catholic mission, so that classrooms, teachers’ houses and the priest’s house have become village housing, in a somewhat post-apocalyptic context (Figure 6).

**Figure 6.** Madauri villagers squatting in the former Tabele Catholic mission

Since west coast villages were relocated to Potsdam, which is much nearer to Manam, proximity has enabled these villagers to return and keep in contact more easily. Very few people have returned to the south and the eastern parts of the island, most damaged by the volcanic eruption, where Warisi village was described as a “desert”. A significant number have gone back to Dugulaba despite the more extensive damage in the south. Some of those who had returned to Manam found it now too isolated and quiet, and there were indications that the population of Zogari had declined between 2012 and 2014.

The Catholic mission and government school at Tabele, a substantial presence on the island before the eruption, have crumbled and there is no formal Catholic presence on the island, nor Seventh Day Adventist missionaries in Budua or Dugulaba. However, the New Tribes mission (four adults and two children) has returned to Zogari village and constitutes the only “alien” presence on the island. Although the provincial government estimates that about 300 people live on Manam, that is almost certainly a significant underestimate, and the real figure is more likely to be upwards of 1,500 – perhaps 10 per cent of the Manam population.
HOUSING AND ENERGY

Housing is almost entirely traditional with wooden floors, bamboo walls, black palm (limbum) floors and coconut frond roofs. Houses last for between 5 and 12 years. The houses have been rebuilt in traditional forms with long sloping roofs that reduce the possibility of their collapsing under the weight of volcanic ash from ongoing eruptions, and far enough apart to prevent any fire spreading between them. In Baliau, at least one house was built from modern materials – iron roof and plasterboard walls – but the cost of such materials and transportation reduces the immediate likelihood of this becoming much more common. It nonetheless represents a commitment to permanence.

Figure 7. Baliau village homesteads

Since the eruption, there have been no Catholic missionaries at either Tabele or Bieng, therefore there is no longer any electricity at either location. The two missionary families in Zogari village have solar panels on their western-style houses, but they have done nothing to provide such amenities for the villagers. Village cooking is entirely done over wood-fuelled fires, either inside the house or outside. Lighting is more varied now than in the past as some people have purchased solar battery chargers and have lanterns that are powered by solar batteries. However, access to this type of lighting is limited to those individuals who have enough money (usually through remittances) to purchase these lanterns, or have been given them by relatives.

As in the past, only pedestrian traffic exists, and the few bicycles and mopeds that existed before have not returned as they would be useless on the existing paths that now cross lava flows and other obstacles.
Another Manam?
The forced migration of the population of Manam Island, Papua New Guinea, due to volcanic eruptions 2004–2005

Agriculture

Re-establishing livelihoods, and especially gardens, was not easy. When Dugulaba villagers returned en masse after the violence, they were supplied with rice by the Government, but that had expired before their gardens were again productive. Nonetheless, new gardens have been made on Manam by the returnees, and these appear little different and no less fertile than those of the past – with the same combination of food plants (sweet potatoes, taro, banana and cassava) supplemented by galip almonds, breadfruit and coconuts, all of which have returned to productivity. The tallest galip nut trees survived the eruption relatively well. Oranges have been restored successfully. Tobacco does not grow well. Bananas (plantains) are regarded as “disaster crops” since they can survive and more quickly recover from ash falls than most crops. Even at Baliau, as much as 50 cm of tephra covered some old upland gardens, although some cassava had survived; hard work was essential for restoration. Taro was more successful in Baliau than at Zogari, where the ash cover was thicker: “It is just hard work to get to the soil.” That may be even more the case on the east of the island. Restoration of gardens was said to be even more difficult, because when heavy rains created floods, unconsolidated ash was washed over gardens. Erosion was common on the Manam coast because of the volume of ash deposits, but had no impact on livelihoods.
Fishing is common, usually 100 m or so from the shore, using traditional canoes. Spearfishing is equally common.

Copra is actively dried by many households as the main source of income on the island. A number of very small markets had also been established, mainly near Baliau, to exchange garden produce, betel nuts, betel pepper (TP *daka*), fish, edible greens (TP *tulip*) and other goods, but was significant enough to have regular days: Wednesdays, Fridays and Saturdays, much like in Bogia itself. Trade in betel nuts to the mainland was also beginning. Chickens and pigs are again part of the agricultural system.

There is one store in Baliau, but access to processed food is very limited. Diets are thus almost entirely “traditional”. Observation suggested that islanders were healthy (and possibly healthier than those in mainland care centres).

Islanders, especially the *tanepoa*, own a number of boats with outboard motors, hence access to the mainland is not difficult, despite being costly, and there is much travel back and forth between the island and mainland daily.

It is indicative of the determination to re-establish livelihoods in Manam that the returned population have used their own resources to recently reopen a primary school at nearby Bieng so that village children from Baliau can attend school on the island, and not have to move to the mainland. The school has 12 teachers, most from Baliau. Teachers were reported to be paid by the Government. The facilities were quite basic. From the more southern villages such as Zogari, children are still sent back to Potsdam for education where they stay with relatives, but villagers expressed a wish to have their own school and aid post (which would also cater to Waia, Yassa and Madauri).
WATER AND SANITATION

Water is usually drawn from wells close to the shoreline. The water table is well below ground level, perhaps as much as 10 m. As the few pumps that once existed have broken, drawing water is an arduous task. A few water tanks exist on the island, which were apparently donated by World Vision prior to the eruption (Mercer and Kelman, 2010). There was no obvious evidence of toilets, but all households live close to the sea. Fragmented data collected in 2014 suggest that, of the enumerated 24 households in Baliau, 11 had pit toilets, 4 used the bush, and the remainder used the bush or the sea. Of 10 households surveyed in Dugulaba, 3 used the bush and 10 the sea. A similar situation was evident in 2015, with most households in most villages simply using the bush.

The Manam population appeared healthy, and no concerns were expressed about health status, although islanders wanted an aid post. In 2010, a number of people (perhaps no more than 4 but possibly as many as 15) had died on Manam from what was thought to be cholera, but they had just returned from the mainland, which may have been where the problem probably arose.

SOCIAL ISSUES

Life on Manam is not without social problems, many the result of limited accessibility and the lack of infrastructure. Social worlds on the island are truncated, but people return to the care centres for family, and village celebrations and islanders living in the care centres return to Manam for burials. Frustration with the cost of transport was frequently expressed. Prior to the eruption, a government-operated boat ferried people, cocoa and copra back and forth between Bogia township and Manam, but since the eruption in 2005, there has been no regular government transportation to and from the island. Nonetheless, a steady flow of people travel back and forth between Bogia and Manam in small privately owned and operated dinghies. The cost of travel is considerable, based primarily on the cost of fuel for outboard motors, but travel is essential for commerce and access to health care.

As on the mainland, home brew (jawa) is also common on Manam and, again especially on Sundays, with the same problematic outcomes as on the mainland.

Figure 10. Volcanic tephra (scoria) from Manam


3 On record with the authors.
A SAFE HAVEN?

The Tabele volcanology monitoring station was destroyed in the 2004/2005 eruptions, and there was no subsequent on-island monitoring of the volcano. Given the extent of volcanic activity since the 2004/2005 eruptions and the potential hazard of ash emissions, the lack of on-site monitoring is a liability, and makes residence on Manam rather more problematic. However, magma detectors have been installed in four places and a seismograph installed at Tabele, monitored from Bogia, to transfer data to Rabaul. The island remains permanently on a stage 2 alert.

Figure 11. Tephra and ash, Baliau village, Manam Island

Figure 12. Manam in “normal” times

Despite being one of the two most active volcanoes in the country, and therefore extremely likely to have further eruptions in the not necessarily distant future, Manam has never erupted violently without “reasonable” warning, either in terms of its activity being formally monitored by the RVO (and, in the past, also at Tabele and Warisi on Manam), or in terms of the ability of local people to recognize significant warning signals that point to greater activity. There is a widespread perception that a “big one” is due but no volcanological evidence to support this notion. While formal monitoring has been reduced, it could be relatively easily reinstated. Nor are people as isolated as in the past. Mobile phones, even on Manam (charged with the use of solar batteries) are common, reception is very good, and they are likely to be invaluable in any kind of future disaster.

Islanders recognize certain natural phenomena, such as a prolonged low tide or an extended dry season, as being associated with intensified volcanic activity. Likewise, earthquakes, singing from a particular bird, extended silence (from domestic and other animals), very hot sun, and birds flying away are all believed to herald intensified volcanic activity (Mercer and Kelman, 2010).

In practice, as the 2004/2005 eruption demonstrated, the build-up to a substantial eruption is relatively slow and evident in increased ash and tephra deposition before the most extreme events. Minimal mitigation to reduce any impact from volcanic eruption is possible, although islanders have taken the obvious steps of locating houses and villages away from the well-defined eruptive pathways. Consequently, while there have been casualties in the past, these have not been as numerous as in many other volcanic contexts. Indeed, other than in 2004/2005, the only reported deaths since the start of the twentieth century were in 1996 when 13 people died after being engulfed in a pyroclastic flow near Budua, and in 2007 when 4 people were caught in a mudflow at Dangale in a non-eruptive phase. For all that, return and safety were well summed up by one Baliau leader: “Of course we’re afraid, but we’re glad to be back on our own land.”

CONCLUSION

Significantly, after the forced removal in 1954 of the entire but much smaller population of nearby Bam Island due to volcanic eruption, the people were so miserable on the mainland that many succumbed to illness, malnutrition, malaise and eventual death, at a rate so alarming that the Government decided it was better to allow them to return despite continuing volcanic activity (Johnson, 2013:187). While that was 60 years ago, and for a quite different population, there are certain similarities suggesting that a similar return outcome is not so implausible for the Manam population, despite the Manam Volcano’s greater volcanicity. Indeed, gradually, new lives and livelihoods are being restored on Manam without government assistance. It could even be argued that with current means of communication and improved transportation, evacuation of the island’s population could be accomplished earlier and more rapidly in the future, if need be, than has been possible in the past.

Not surprisingly, among the returnees, there was a particularly strong sentiment that “The government has not helped us thus far; there is always a delay, always they tell us there is no money” and “Donors promise things, but they do not appear either.” Indeed, they, like other Manam islanders, believe they should be compensated for the time they were forced to remain in the care centres. Despite these concerns, most returnees are satisfied with the lives they have recreated on Manam and have no wish to return to the uncertainties of the mainland.

Inevitably, many, like the president of the labu LLGC, are fearful of returning: “We believe in the science that it is too dangerous to go back.” Others felt return would be unusually demanding of labour, to rebuild houses and re-establish gardens, only for another eruption to occur, and the whole process repeated. Yet others feared that the Government would stand by the threat not to rescue them “next time”. Significantly, one of those opposed to return was Herman Tibong, the lone Manam volcanologist: “Manam is not safe; we must have a proper alternative.” A proper alternative, however illusory it remains, was always alluring. Moreover, some people are
resistant to the idea of return and have begun to see benefits from a mainland location. This perspective and the fact that only a relatively small number of people have chosen to return, although there is nothing in practice to discourage such a move (beyond the need to rebuild houses and the absence of infrastructure on Manam), suggests that this may not be a preferred option.

Manam has not been quiescent since 2005, although only once have villagers moved away, and then locally and temporarily. In 2006, a lava flow travelled down the south-west valley to about 600 m elevation, a pyroclastic flow travelled down the same valley to about 500 m elevation, and about 7–8 cm of ash was deposited on the eastern part of the island. At that time, about 300 people had returned to the island. In 2007, it was reported that four people were killed and one was injured from an ash-and-mud avalanche in a valley on the northern part of the island. Three pyroclastic flows descended the south-east valley, stopping by a few to several hundred metres from the coastline. The first and largest flow devastated a broad unpopulated area between Warisi and Dugulaba villages. In December 2010, the alert on Manam was raised to stage 3 (which warned people not to go to higher gardens and enter or cross valleys) but without incident. In Dugulaba, some 1,000 people were said to be frightened and waiting evacuation, and fuel was sent from Madang to Bogia to make that possible, but the crisis quickly passed (Nalu, 2011a) despite pyroclastic flows in unoccupied areas. In 2013, the volcano flared up again, with villagers, houses and trees covered in dust and dirt, as ash spread from Dugulaba to Kuluguma, and the returnees to Dugulaba briefly had to move away, but again without incident. Normality was quickly restored. In August 2015, the volcano erupted again for a day, and although villagers prepared for evacuation, it proved unnecessary despite damage to gardens and water supplies. No major casualties occurred, though several islanders were hit by tephra, and respiratory problems followed, gardens were covered in ash, and some plants such as bananas were damaged. Agricultural problems were accentuated by the prevailing drought conditions, and some relief foods were provided. Mud flows and pyroclastic flows are always possible. In many respects, while challenging and demanding of additional labour and heightened concern, that represented a rather familiar “living with hazard”, but the continued occurrence of hazard events indicated that Manam was very much alive and not merely potentially dangerous.

That no one has been injured since 2005 (although there were fewer there to be injured and eruptions have been less dangerous) perhaps emphasizes that a combination of local knowledge and superior volcanological monitoring (were that to be properly re-established), alongside all situations in the past where casualties have largely been avoided, suggest that short of a cataclysmic eruption in the future a return to Manam may be much the cheapest and most culturally appropriate solution. Local awareness of hazard exists. It would, in any case, be appropriate for the provincial government to provide some basic services to the residents of Manam. Not surprisingly, governments are reluctant to encourage return because of the cost of developing services on a small island that is considered unsafe for living.

The RVO has conducted comprehensive volcano awareness programmes at and near high-risk volcanoes in Papua New Guinea since 2000. The main objective of the awareness programme is “[d]isaster mitigation from natural hazards, with a focus on volcanoes and volcano-related activities, such as tsunamis”. They aim “[…] to promote awareness of volcanic hazards and risks so that communities become self-reliant” (Mulina, Sukua and Tibong, 2011:1). RVO representatives and the Madang Disaster Office have conducted awareness programmes not only at the care centres but on Manam Island itself. World Vision has noted that the training provided in 2003 assisted with an orderly evacuation, and repeated and refresher trainings would be crucial.

During the 2004/2005 evacuation, it was evident that a significant problem for speedy evacuation off the island was poor landing zones and the absence of wharfs, especially on the east side of Manam (which may have contributed to the boat problems off Warisi). A related problem was the limited number of boats (on Manam or available nearby on the mainland) and their capacity. The RVO (2007) thus concluded that, if there were
to be relocation on Manam, two things would be crucial: (a) construction of adequate wharfs (and escape procedures); and (b) construction of a number of emergency concrete bunkers as temporary shelters. With such modifications (and a more regular boat service), living on Manam does offer a future, and a much cheaper one than Andarum. However, as time goes on, it is most likely that fewer Manam islanders will wish to return, the carrying capacity of the island is limited, and it could not now support the entire Manam population.

As burial beliefs and practices indicate, Manam islanders are unlikely to ever give up the sense of Manam being their home, or to relinquish their ancestral place in terms of beliefs about the soul of the dead and the role of the ancestors in the well-being of the living. The greatest risk of governments supporting a partial “back to Manam” solution is that they would then conceivably abandon any interest in supporting necessary alternatives (as the Manam population increases), but alternatives are essential. Certainly, in some part, the return to Manam has been by default, and it would be unfortunate that future return also be by default, simply because nothing else was possible and conditions elsewhere became intolerable. Yet, very clearly, if nothing else, Manam will always be there and will always be home, but that home will probably be a virtual one for many.
6. A diverse outcome?

Mangem Care Centre.
Photo: Nancy Lutkehaus © 2015
6. A diverse outcome?

There will always be two Manams: the real one and Andarum.

– Boga Figa

It is evident that problems are attached to all possible resettlement solutions, whether to remain in the care centres (opposed by both Manam islanders and local landowners), to move to Andarum (distant from the coast and Manam and unlikely to come to fruition for many years), or to return to Manam (potentially unsafe, opposed by the Government and distant from amenities and services). It is also evident that people do not all share a similar vision of the future: most obviously, those who have returned to Manam and those who prefer a “definitive” solution in Andarum. Despite many statements at various times in the media and in meetings that “all/most Manam islanders want [...]”, there is no actual indication that the Manam islanders have systematically been asked where they would like to be and under what circumstances. From the evidence presented above, limited though it is, it is apparent that there are differences of opinion, and that one size does not fit all, so that the best outcome might prove to be a mixed one. As the poignant statement outside the Mangem Care Centre (see chapter opener) states, the time is overdue to “emerge from insecurity and uncertainty.”

Beyond these options, it is not evident that, with one exception, there are others. That one exception has been mentioned by some. Nubia, a former coastal plantation on the mainland across from Manam, was made available for government purchase by the Wewak Catholic diocese (Nalu, 2011a). Its present status is unclear. Although not large enough for the entire island population, it would allow for some Manam islanders to continue to remain along the coast and close to key services in Bogia (notably health and secondary education) and in a location where they are closer to traditional exchange partners. Awar plantation, just to the north of Potsdam, was also purchased alongside the three other plantations in 1996, and it is possible that this site, apparently still owned by the Government, might also make a potential site (as was the original intention). While meetings have been held at Nubia, where local landowners rejected the idea of it becoming a resettlement site for the Manam population, both Nubia and Awar offer less developed coastal sites. The coast also offers more diverse livelihood possibilities than any other site.

In recent times, no payments appear to have been made to the traditional owners of the former Potsdam, Mangem and Asuramba plantations for the use of this land for care centres, presumably on the assumption that this was government land and that the care centres would be temporary. In northern Bougainville, some disused plantations are being settled and worked by migrants from south Bougainville, who pay a rent and a proportion of the income generated. This may be a possible model for the development of resettlement in such places as Nubia or Awar. (The three present care centre sites are too small to sustain such a model, and the time has now passed to enable that.)
A diverse outcome?

A number of Manam islanders are reported to have moved to Wewak (and possibly some of the offshore islands) and purchased land there, perhaps where they have taoa relationships. However, it is generally perceived by both the provincial government and Manam islanders that any formal resettlement solution must occur within the province, which rules out the possibility of a formal migration to East Sepik where taoa partners exist (and where some have gone individually and purchased land). In any case, population densities in Sepik are higher than around Bogia.

The Manam islanders want to remain on their island as long as they reasonably can, even when the risk rumbles the earth beneath them and fills the sky with a sooty rain. It is hard to blame them when the alternatives available to them for the future are bleak and distant, and seemingly disregard who they are and what their rights are. It is no foolish nostalgia, and new livelihoods have been established on Manam. Cocoa was grown on Manam in the 1990s, after the copra price fell, though it was attacked by cocoa pod borers and the cash economy reverted to copra. If cocoa could be re-established on Manam, and there is no obvious reason why it should not be, it would make a much more valuable cash crop than copra, and could sustain a more commercial island economy. It is, however, affected by ash deposits, but probably only at high densities.

For some, at least the move to the mainland has been a catalyst for finding urban employment (as among women in Mangem especially) and that has offered satisfactory lives and livelihoods to many, with the exception of many single mothers with unplanned pregnancies. By contrast, Manam can only support mainly subsistence non-agricultural employment, despite opportunities for cocoa production, beyond a small number of workers in restored health and education facilities. Nonetheless, most of those who have returned are satisfied with the lives they have recreated and have no wish to return to the uncertainties of the mainland.

Nonetheless, in Papua New Guinea, as elsewhere in the Pacific, small and relatively remote islands are losing population relative to larger islands and mainlands, underpinned by the desire for access to employment, health and education services. That process is certainly evident in Manam; hence, it is improbably that all, or perhaps even most, islanders would want to return, even if adequate services were provided there. Moreover, many Manam islanders – those below the age of 20 – have grown up without any real knowledge of island life itself. Soon, that population group will become a demographic majority.

At every site, there are both opportunities and uncertainties, and the Manam islanders have a range of different attitudes to particular places and preferences. There has been a reluctance to consider return migration or any other options, but the lengthy time that it will take to actually develop the Andarum site, demands some immediate reconsideration of other options. As provincial government official Rudolf Mongalle said, people in the care centres are “fed up” and “tired” – they want something soon.

Since the Manam population continues to grow, not all Manam islanders could possibly be accommodated on Manam, even if that became a policy option and more people wanted to return. Andarum, as presently conceived, is far into the future. The care centre frustrations and tensions remain. Ultimately, therefore, Manam needs some diversity of alternatives. It would seem appropriate to develop a policy and proposal for a return to Manam since that could be instantaneous, but even that would necessitate proper organization, adequate wharfs, support for education and health services, adequate RVO monitoring, and perhaps even grants to encourage people to re-establish adequate houses there. Remarkably, a massive Digicel tower was constructed on Manam in 2014, the largest visible symbol of modernity within tens of kilometres. The private sector appears to have more faith in the future of Manam than the public sector.

At the same time, it is crucial that progress be made on establishing a resettlement site at Andarum. This inaccessible site is the safest of all, but the cost of developing the site, after rights have been negotiated, is excessive and it is not clear if the funds will ever be provided. Since the
landowners at Andarum – a new host community – seek access themselves, it would make sense to construct an access road as soon as possible. That might be followed by an old fashioned “site and service” scheme where a few basic services are provided, enabling settlers to clear the land, establish houses and gardens, and create a do-it-yourself new Manam just as other Manam islanders have redeveloped the old Manam.

Since this will take time, it would be invaluable to explore the possibility of some islanders being resettled at Awar and/or Nubia. That will not be easy, but it would potentially – and relatively quickly – take some pressure off the current care centres, their residents and the host villages. That might entail constructing certain new facilities – such as schools and aid posts – to be shared by hosts and settlers. It would certainly be a cheaper option than developing Andarum.

Returning to Manam is much the cheapest but also the most physically dangerous option. The volcano has had a continuous history of eruption in the past, and Manam islanders have coped with it. It will always be there, will always be home, and will always be an option for some people. But just as some Manam islanders now work in Port Moresby, Lae and elsewhere, there will be differences of opinion and preferences, let alone those of policymakers and present and future host villages. Such differences of opinion must be respected. All this diversity of practice and opinion suggests that there will never be just one new Manam, or even an old and a new Manam, but that there will be a future of many Manams.
Manam Island view from Bogia.
Photo: Muse Mohammed. IOM © 2016
7. Conclusion

In contrast to the more publicized “evolutionary” changes relating to small islands threatened by climate change, what is distinctive about migration and resettlement from Manam Island is that the population has usually had to be evacuated quickly under frightening and potentially life-threatening catastrophic conditions. It is in such cases of extreme natural disaster, in some ways predictable but never entirely expected, and ultimately unavoidable (in terms of occurrence), that the stark outlines of social, economic and political problems, many of which are of general concern to all small islands, whether they face such imminent cataclysmic disaster as a volcanic eruption or not, become apparent.

Volcanic islands such as Manam therefore can provide important cautionary insights into the limits faced by traditional networks of social relations in small island ecosystems under new circumstances of climate change and environmental disaster. When a situation of temporary displacement, which has hitherto always been the case, becomes one of relatively permanent displacement, in this case for a decade, based largely upon the strictures imposed by the State (which has defined Manam as unsafe and uninhabitable and hence has shut down social services on the island), traditional systems of informal social assistance, notably long-standing taoa relationships, can break down. As the circumstances of early evacuations suggest, relationships with taoa partners and others could easily become fragile and overstretched. In the case of the Manam population, this situation has caused them to be classified as IDPs, although that category has no real meaning to most Manam islanders.

Although displacement occurs as a result of political violence in Papua New Guinea, twice as many people have been internally displaced as a result of disasters (IOM, 2015). Displaced populations can be extremely vulnerable to disease, social disintegration, crime, domestic violence, poverty and mental illness, the longer they remain displaced from their homeland or cannot achieve satisfactory permanent resettlement. The social, political and economic ramifications of the situation of the Manam islanders is thus a particular and challenging case study to be carefully analysed in terms of what could happen elsewhere in the future, especially in countries with fragile governance structures, and what should be avoided, if at all possible, when island populations need to be resettled. But above all, successfully negotiating that future is extremely important to the Manam people.

As one tanepoa quite simply stated: “Our main concern is where our future will be.” The resettlement of Manam islanders has been an exercise in frustration and uncertainty. “We are tired of people coming and telling us lies about the two strategies.” Desperation was setting in: “The more the delay, the more we suffer”, “We must go soon – the youth must have something to do; now they get drunk and fight.” In short, a decade after the eruption and resettlement, most Manam islanders are wholly uncertain about what the future holds. Indeed, a new variable has been introduced; after a decade in the care centres, many young people, the future of Manam society, have acquired “a sense of belonging to the [new] place” and are quite unfamiliar with Manam itself. In a sense, they have become islanders without an island.
Moreover, despite the 1957/1958 and 1996 evacuations, when promises appear to have been made that a resettlement site would be sought, there is no indication that was ever done. Thus, it was only very belatedly, in 2006 in the aftermath of the 2004/2005 eruptions, that some efforts were made, and then only after the Government had declared that Manam was uninhabitable. Even evacuation plans were lacking. Over time, land issues were making it increasingly difficult to find any site. No great urgency was attached to the task. As recently as 2012, the Iabu Local Government Council president, Martin Ururu, has charged of the Mangem centre:

_We don’t have land allocated for our people to farm and feed their families and generate revenue […] so we have been at the mercy of the Catholic Church and the nearby villages. We cannot continue to rely on the support of nearby village because they have helped us for too long._

And he recognized problems:

_I must say frankly that there are differences between the Manam settlers and the Bogia people, and I understand their [Bogia people] stand for they have accommodated us for a long time. We cannot share their land as it is overcrowded._

(ABC, 2012)

A year later, the former Madang Member of Parliament, Sir Peter Barter, stated that the whole saga would not have occurred had it not been for a litany of inept politicians and ineffective public servants (Nalu, 2011a). Bluntly, as Boga Figa has said, “[t]he IDP communities have lost trust in governments and administrations.” Their status as IDPs has just one advantage; it has resulted in outside agencies taking some interest in their fate, and it may well be that only pressure from international agencies will lead to an effective resolution.

At Mangem in 2011, after the decision that some should return to Manam, one islander said: “I don’t want to return to the island. I want the government to resettle us” (IRIN, 2010). At that point, the Government had encouraged return. The response and the change of heart by the Government are further straightforward indications of both the diversity of options, aspirations, perceptions and choices, and the confusion that reigns as decisions and desires change, alongside the inability to turn one (or more) viable options into a successful strategy, even after a decade. Meanwhile, the settlers in the care centres continue to experience problems of overcrowding, land tenure, health, employment and above all, the anomy that comes from having no sense of a future. A durable action is urgently needed.

### PACIFIC RESETTLEMENT

The problems faced by Manam islanders are, sadly, not unique. Most examples of resettlement in the Pacific, whether for political, economic or environmental reasons, have been in some respects unsuccessful, often resulting in land disputes, social conflicts, marginalization and impoverishment, and return migration. Resettlement after volcanic eruption has posed particular problems because of uncertainty over
the duration of the necessary displacement, the wish of most of those displaced to return when possible, and the particular difficulty of return migration. Manam has proved no exception, and the logistics are particularly complicated.

What has dominated the recent existence of the Manam islanders has been a decade of uncertainty. Indeed, the possibility of the Andarum site providing an end to uncertainty has been the single most attractive feature of that proposal (despite its outcome being in the distant future). Uncertainty – about volcanicity, use of funds, prioritization of needs, locus of authority and other concerns – is a defining element of environmental crises, and in this case it has been prolonged for a decade. That has allowed for numerous possibilities for graft, manipulation and conflict (Button, 2010). In the Manam context, this has ranged from local incidents, such as the sale of food and supplies that were meant to be donated to the islanders and the theft of food meant to be delivered to the care centres, to national and provincial mismanagement of aid funds and delays by the Bogia Member of Parliament in facilitating the government-approved resettlement plan.

Beyond uncertainty is land access. Everywhere in the Pacific, landowners have been increasingly reluctant to cede land to others, however moral and worthy their claims, and however much land they own, even when they shared kinship ties or exchange relationships. In post-colonial times, land boundaries have become frozen, populations have grown, and land become too valuable for most people to be willing to enable even displaced people to lease or purchase it. Land once alienated for such things as plantations has been resumed by the former owners rather than made available to governments for potential settlers. Even where resettlement has been highly localized and within the same cultural area, land transfers have proved complex and challenging. Such is precisely the case for Manam.

Relocation and resettlement have posed problems not only of access to land and, to a much lesser extent, marine resources (hence, issues of food security), but also of access to such resources as employment, education and health services, in an increasingly competitive arena where population growth is rapid, unemployment is rife, and public service provision is weak. Social tensions have followed, as land has become an even more valuable asset and government less autocratic and effective and more contested.

The retention of cultural practices and distinct forms of governance is likely to be challenging, yet continuity is exactly what settlers want. It is unsurprising that resettled populations retain at least some desire to return home, however implausible this may be, and some sense of detachment from new “homes”. Vulnerability emphasizes nostalgia and demand for homelands and security, further constraining the ability and desire to “fit in” and adjust.

As in other places where volcanic eruptions are not unusual, Manam islanders have no strategies that mitigate against significant eruptions (beyond building their houses in areas known to be relatively safe and having tooa on the mainland for times of emergency). As long as people continue to live in such environments, the situation demands the existence of a strategy for mass evacuation in the face of natural disasters and at least temporary resettlement. Since Papua New Guinea has a considerable number of such places, it is crucial that there be a suite of such plans. At the moment, they seem to be entirely absent. This is bizarre and disappointing in a country where not only do so many active (and potentially active) volcanoes exist but where many are on quite small islands, as typified by Manam.

PARALLELS AND DIVERGENCES

How different then is Manam from elsewhere? Catastrophic environmental events globally have resulted in necessary migration, usually short-term, with migrants subsequently returning to resume normal lives, but perhaps in modified circumstances. Many hazard events, however violent, are short-term with localized consequences (Connell, 2012). Volcanic eruptions, by contrast, have often been more devastating and repetitive so that several have resulted in formal resettlement schemes. Lopevi
in Vanuatu has erupted at least 22 times since 1862, and in 1960, the population of about 150 people moved to the nearby islands of Paama and Epi because of the recurrent danger. It is the only Pacific island to have been entirely depopulated because of volcanic activity. In 1981, Pagan (Northern Marianas) erupted, and the population of less than a hundred was resettled on Saipan; even smaller populations have been resettled from the nearby volcanic islands of Alamagan and Agrihan. Repeated petitions by the islanders to return have been rejected by the authorities due to the continuing threat posed by volcanic activity; about 300 displaced residents wish to return to live there, and a handful have returned, just as they have done on Manam.

In Papua New Guinea, despite the much smaller size of Bam, there are significant parallels between the 1954 evacuation of the island and the outcome at Manam. Return is almost always the preferred option, but it is contingent on safety. That is why Lopevi is unpopulated. In Vanuatu, a small proportion of the population of Ambrym were resettled on the central island of Efate after a major eruption in 1950; this resulted in a two-location solution, with some remaining at home and others closer to the urban centre on Efate. Volcanic eruptions on Niuafo’ou (Tonga) in 1946 prompted the resettlement of the population on larger islands to the south, although many were later to return. Only in Tonga was there a formal settlement scheme (Rogers, 1981). At least some of these resettled populations returned, though resettlement was often a catalyst for some longer term migration, since displaced populations have never returned in their entirety. The spatial outcome was much as in Ambrym, but in Tonga there was a three-location outcome.

After Rabaul (Papua New Guinea) was devastated by volcanic eruption in 1994, residents were moved 50 km away. Many chose to retain land in Rabaul and regularly spent time at both locations, without deciding on a primary home. Land was constantly in dispute at the resettlement site, partly because the Government had sought to allocate land to individual households rather than according to traditional precepts, but after 10 years, few had gained title to land (Martin, 2013). Again, therefore, there was a multiple location outcome.

In Rabaul, as Neumann pointed out, “The victims of the disaster were resourceful and resilient to a degree which had not been anticipated by those who drew up the disaster plan” (1996:170). So too have Manam islanders been, but they need an appropriate context for resourcefulness. Equally important in Rabaul was the fact that many people affected by the eruption felt that they should have been involved to a much greater degree than they were in the decision-making processes about reconstruction and future disaster preparedness plans (Neumann, 1996:171), an oversight that they interpreted as a lack of respect for them on the part of the Government.

What similar circumstances indicate is that, first, most people wish to return home, but safety requirements and necessary caution may prevent this; second, there needs to be constant consultation with the affected communities to ensure that relocation meets their needs as far as possible. Lastly, the best time to develop plans for evacuation and resettlement is before volcanic eruptions when there is much less urgency.

THE CHALLENGES OF DISPLACEMENT AND RELOCATION

Once the immediate danger of a natural disaster is over and humanitarian aid has been solicited and deployed, there is a much longer, less urgent, but often more difficult period of returning people’s lives to some state of “normalcy”. The initial benevolence represented by humanitarian aid from other Papua New Guineans, as well as the Government of Papua New Guinea and international aid agencies – that is, the moral sentiments that were mobilized to help the Manam – can never be sustained. While assistance was immediately forthcoming and it was relatively easy to get emergency relief funds and other forms of aid in the immediate wake of the disaster, the Government of Papua New Guinea was then faced with having to solve the long-term problems associated with resettlement. Over time, quite different sentiments emerge, and temporarily resettled populations are easily forgotten. The issues that surfaced for the Manam resettlement exemplify the tensions that commonly exist.
Between migrants and established populations, especially where resources (above all land, but also employment and various services) are valuable and in short supply, government regulation and support is weak, and plans for resettlement are non-existent.

Despite multiple earlier eruptions, notably in 1957 (when the Australian administration evacuated everyone to the mainland for an extended period of time), the 2004/2005 eruptions found both the provincial and national governments without any plan for evacuation, let alone relocation. That posed minor problems in 2010 and 2015. A decade after the eruptions, the Government is now faced with allegations of inaction and inhumane treatment of the Manam islanders. There has even been talk of bringing the plight of the islanders to the Office of the UN High Commissioner for Human Rights (PINA, 2013). A natural disaster has been followed by human disasters.

When the largest of the villages, Baliau, agreed to return to Manam at the urging of the provincial government, it was because the Baliau chief agreed to do so. Involvement of traditional leaders is crucial to the success of any planning and resettlement process. As in the Rabaul resettlement (Neumann 1996), Manam leaders feel they had not been included in the Government’s plans for resettlement and that they had not been shown respect. The director of Madang Disaster Office, Rudolph Mongallee, concluded that one of the lessons learned from the Manam disaster was the need to include local leaders to allow them to facilitate the relocation process. That would seem quite basic, but it was not always adhered to for any phase of the ongoing Manam resettlement process.

In various other cases where resettlement has occurred from small and remote islands, whether because of natural hazards (including volcanic activity) or population pressure, administering authorities and governments have sought some combination of making resettlement permanent (and discouraging return migration), or even ensuring that the entire population leaves, because the costs of providing social and physical infrastructure to remote places are prohibitive.

Of all the countries in the Pacific, Papua New Guinea displays perhaps the strongest local attachments to land, hence access to land is the biggest issue to be faced in resettlement plans. As soon as it became apparent that Manam islanders were not going to be able to return permanently to their island, land has been the most divisive and difficult factor in their resettlement. Since land is such a valuable resource for people who are primarily subsistence farmers, the permanent transfer of use rights to land for migrants from small islands to the mainland may be the source of legal disputes and physical violence. It proved the most critical factors in preventing resettlement from the Carteret Islands to the mainland of Bougainville (Papua New Guinea), constantly preventing resettlement (IOM, 2015; Connell, forthcoming). At Rabaul, land conflicts surfaced after resettlement in 1994, even when the land involved had traditionally belonged to the same ethnic group; further issues emerged around customary versus non-customary land ownership, allocation of blocks of land in designated resettlement areas and subsistence versus cash crop farming, which pose significant problems both at local and provincial levels. The inability to obtain adequate access to land, and the tensions and violence around the Manam care centres, despite considerable cultural similarities with local groups, emphasize the extraordinary difficulty of resettlement, where land tenure, access to employment and services, and cultural distinctions, have resulted in tensions with established residents. The significance of land can never be discounted or diminished.

Relocation unravels spatially and culturally based patterns of social organization as it uproots all members of the community, including the sick, elderly and very young, allowing for little psychological or physical preparation, with many wishing nothing more than to return to their homes, and most experiencing a stark sense of loss. Resettlement almost always involves risks of landlessness, homelessness, joblessness, marginalization, food insecurity, loss of access to common property resources, increased morbidity and social disarticulation (Cernea, 2004); hence, there have been few entirely successful outcomes. These risks and these problems have meant that conflicts exist in and around the care
centres for the same reasons that provoked the violence and crises in the 2000s. A sense of bitterness and despondency prevails; as a resident of the Mangem Care Centre stated:

The situation in the care centres is getting worse. We want a quicker resettlement process because government is spending a lot of money in humanitarian relief rather than development. There is no sign of government in the care centres. Without any response to the immediate needs the displaced Manam people will continue to be “reluctant” and “stubborn” and already some have expressed a desire to return to their ancestral land and die there. We have suffered too long; we are like refugees on our own land, forgotten and neglected. Now, El Niño is killing us. We don’t know who to turn to.

Waiting uncertainly for intangible processes that never appear to deliver practical results is a recipe for further problems.

Ultimately, one of the greatest challenges in the Pacific is the tenuous and weak nature of the nation-State. National and provincial governments do not have the will, resources (financial and human) or capacity to develop, legislate for or administer effective resettlement policies for existing, let alone future uncertainties, especially in the face of local anxieties, tensions and hegemony over land. As the case of Manam demonstrates, it is increasingly difficult to find locations for people displaced by hazard, yet future hazards are certain, and, sadly, may well recur on Manam again. The uncertainties of volcanicity make all this much worse and much more unpredictable. Moreover, once the immediate threat of a hazard is over, the public and governments lose interest in the disaster, as new events overshadow the catastrophe. As Boga Figa has argued: “The greatest disaster is that the national and provincial governments have failed in the handling of this disaster.” A natural geophysical disaster became a human one.

The clearest lessons that Manam provides is that resettlement is frequently unwelcome by settlers and by hosts, even in response to extreme hazards, and has too often equated with disempowerment and loss of autonomy. Resettlement minimally needs the consent of both settlers and hosts, trust, and benevolent and wise leadership. Resettlement has been least successful where responses to environmental hazards have necessitated speed, as is inevitably true of volcanic eruption, and where settlers have no means of adequate and acceptable social and economic development and have not been involved in decision-making, even after the event. Resettlement cannot be accompanied effectively without substantial lead time, consultation, financial resources and management ability (especially for planning and service provision). Moreover, resettlement is not a “one-off event”, but has long-term implications and resonance for sovereignty, cultural continuity, identity, employment, land tenure and access to services, all of which have bearings on ultimate success. It is particularly crucial therefore that in volcanic contexts, such as Manam, evacuation and resettlement plans exist prior to disasters.

Above all, it is crucial that progress is made, not only for the future of the people of Manam, but because the success of the resettlement and/or return of the Manam people is seen by many as a potential model for such islands as Karkar, Long Island and Bam, should they face a similar fate one day. Resettlement must be inclusive and accompanied by social and economic development, which poses problems for States with weak economies and diverse cultures. Manam islanders continue to face an uncertain future.
8. Recommendations

1. It is crucial that the Government of Papua New Guinea pass an appropriate MRA bill as soon as possible. The bill will then enable adequate funding, imminent movement towards the development of a resettlement site at Andarum, to provide the basis for a durable solution, and the establishment of a strong board and the acquisition of good, committed staff.

2. More clarity is required over who is responsible for both resettlement and the status and management of the care centres. The Papua New Guinea National Disaster Centre must play a more visible and active role in conjunction with the Madang Provincial Government. A proper structure and proper support for the MRA will be essential to ensure that resettlement is effectively implemented within a reasonable time period.

3. Greater involvement of local leaders through the labu and Yawar Local Level Government Councils, and through the *kukurai* of Manam, should be ensured throughout discussions and implementation of the resettlement processes. Local leaders should be involved, be aware and in a better position to help facilitate the relocation of those affected by perceiving themselves as owners of the projects.

4. All potential resettlement options should be reconsidered, including Manam and Awar/Nubia. It would be substantially quicker and cheaper to develop a financial arrangement with Awar and Nubia landowners than to develop Andarum, and it is not clear what funding for Andarum will become available. Such a coastal site would accommodate a proportion, but not all, of the Manam population.

5. The Madang Provincial Government must provide basic rehabilitation for Manam Island. Since a substantial part of the Manam population were sent back, this is both ethical and essential, and islanders are citizens, and also appropriate since no formal resettlement is likely to occur for at least three years. That will also support a better population balance— with less pressure on the care centres and thus on the host villages. An immediate activity would be to ensure that water supplies and sources, tanks and wells, are properly covered both for hygiene and against ash falls. More adequate provision of aid posts and education facilities is necessary, along with the rehabilitation of the round island road, since good mobility is essential. Cocoa development should be re-established to enable more secure livelihoods. At least two wharves should be constructed near key villages and provision made for a boat (perhaps based in Bogia, that might cover Karkar among others and would require its own feasibility study) to be available in case of evacuation, but also to provide regular transport of goods and people. Provision should also be made for the purchase of iron sheets to replaces “traditional” roofs; a national NGO might be willing to support and lead such a housing programme.

6. The Madang Provincial Government, in conjunction with the National Disaster Centre, must develop a plan for the following: (a) mass evacuation in natural disasters; and (b) immediate relocation that would meet the needs of Manam and the province’s several volcanic islands such as Karkar. The participation of Manam leaders in this process would be invaluable.
7. The Madang Provincial Government should ensure that proper emergency kits exist in all villages on Manam and also at other volcanic sites.

8. The IOM Madang team should collect and assemble basic data on the number, composition and present location of households to be resettled, in both the care centres and on Manam. It is imperative that there be good data on the number and size of households who will be involved in resettlement. This process is ongoing at the time of writing.

9. The Madang Provincial Government has recognized that more needs to be done for the welfare of people in the care centres. A start would be for the IOM Madang team to work with the Divine Word University (Madang) to assess the health and nutrition status of Manam people in the care centres, and ensure that this has a practical outcome. That should lead towards the development of Participatory Health and Hygiene Education programmes both in the care centres and in Manam.

10. The health needs of the Manam islanders need to be addressed with extra attention paid to getting doctors and medical supplies to the care centres, and the host villages, rather than Manam islanders having to get to Bogia or Madang for attention. This is particularly relevant to deal with the high incidence of eye diseases.

11. Alongside the Madang Provincial Government, the IOM Madang team should evaluate and organize the rehabilitation of water supplies and other basic services in the care centres and in the host villages.

12. Key staff from the Madang Provincial Government and local Manam leaders should make a study visit to Kokopo to examine the experience of the Gazelle Restoration Authority.

13. The Madang Provincial Government and the Manam Resettlement Programme should oversee the provision of microfinance for Manam islanders who want loans for boats and outboards. The funds might initially come from AusAID, USAID, among others, in other words, foreign donors and charitable foundations. A provision in the national MRA could also earmark some government funds for this. Such boats would serve as a means of emergency evacuation, marketing goods, gaining access to Bogia hospital and stores, enabling better fishing – and thus access to cash and superior nutrition.

14. It is crucial for the Madang Provincial Government to liaise with the RVO to ensure that proper volcanological monitoring is in place, for Manam, and elsewhere, and that there are effective and established means of regularly and quickly transmitting information to Manam in a form that enables adequate responses.

15. The Government of Papua New Guinea should make provision for Manam settlers to be given priority in the New Zealand Recognised Seasonal Employer and the Australian Pacific Seasonal Worker Pilot Scheme short-term agricultural workers schemes, in the same way that Spain has developed an agricultural worker scheme with Colombia, where preference is given to workers from areas experiencing environmental hazard. The Spanish scheme has benefited displaced communities, women heads of household and people from high-risk zones of natural disasters, that is, areas prone to volcanic activity (de Moor, 2011). Such a programme would reduce population pressures in the care centres and generate a flow of remittance incomes.

16. It would be valuable for the Madang Provincial Government Public Works Department to hire local youth, whether from care centres or host villages, to work on the main coastal road, that would both improve access (including market access) and generate local employment and incomes.
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Appendix: Key informants

1. Martin Ururu (Mangem Care Centre), (Dugulaba, Manam), President, labu Local Government Council
2. Charles Boki (Bogia), (Madauri, Manam), Local business manager
3. Paul Akuram (Bogia), Manam Resettlement Programme Monitor
4. Dr Boga Figa (Madang), Director, Manam Resettlement Programme
5. Elsie Ellison (Madang), (Sarang village), Youth leader, Sarang village
6. Emil (Momae) Sila Kapui (Potsdam Care Centre), (Zogari, Manam), tanepoa labalaba
7. James Moarupu (Zogari, Manam), (Zogari, Manam), Zogari village leader, tanepoa sikisiki
8. Peter Sukua Irakau (Balialu), (Manam), Baliau village leader, tanepoa sikisiki
9. Herman Tibong (Bogia), (Warisi village, Manam), volcanologist (official)
10. Norbert Sono (Lae), (Yassa Village, Manam), accountant
11. Quintin Tupa (Madang), (Yassa Village, Manam), Young adult (university graduate)
12. Anthony Zoromota (Bogia), (Yassa Village, Manam), Ramu Nickel /Lihir goldmine worker
13. Rudolph Mongallees, (Madang), Director, Madang Province Disaster Centre
14. Joe Buleka (Yassa), (Port Moresby), Papua New Guinea Department of Minerals and Energy, Port Moresby
15. Allan Bogomos (Madang), (Bogia), Divine Word University Student
16. John Wauru (Bimat), (Bimat village, North coast, Madang), married to Manam woman and involved with Manam-North Coast reconciliation project
17. John Apui (Yassa village, Potsdam Care Centre), (Yassa, Manam), Care centre resident
18. Peter Muriki (Balaiu tanepoa labalaba), Madang resident, Secretary to Manam Council of Chiefs; Executive Director, Bogia Cooperative Society
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Cover photo: View of Manam Island from Mangem Care Centre on the mainland. Photo: Muse Mohammed © IOM 2016.

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ANOTHER MANAM?

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