

PAPUA NEW GUINEA

Manam Island Volcano - Madang



acaps

Needs assessment briefing note – September 2018

Manam Volcano, on an island off the coast of Madang province in northern Papua New Guinea, erupted early in the morning of 25 August. Lava and ash are affecting nine of 13 villages on the island, which has a population of about 7,000 people. As of 28 August, two of these villages, Dangale (239 people) and Kolang (143 people), have been evacuated to unaffected locations on the island.

Manam is one of PNG's most active volcanoes. In 2004, a series of eruptions resulted in the evacuation of more than 9,000 people to care centres on the mainland. Unresolved issues around their resettlement from the 2004 displacement make people who have already experienced displacement and chosen to return reluctant to leave the island and go back to living in care centres on the mainland.

The volcano is active and continues to emit light to moderate ash. Further significant eruptions are possible. Accurate monitoring of the volcano is not possible at the moment because the equipment of the Rabaul Volcanological Observatory is undergoing maintenance.

Heavy ash fall has also affected nearby Boisa Island, home to 872 people.

Affected Villages	Population	Households	Situation
Kolang	143	70	Completely destroyed and now residing at Madauri village
Dangale	239	94	Completely destroyed and now residing at Zogari village
Iassa	329	82	Heavy ash affecting food gardens and vegetation.
Kuluguma	565	188	
Boda	505	140	
Baliau	2,938	490	
Bokure	50	12	
Warisi	106	28	
Abaria	111	20	
Total for Manam	4986	1124	
Boisa	872	247	
Total (Manam + Boisa)	5,808	1,359	

Humanitarian constraints



Manam island is only accessible by small surface vessels. It is a 45 min boat ride from Bogia district on the mainland which can take more than four hours to reach by vehicle from Madang Town depending on road conditions. Weather conditions affect the sea crossing.



Photo by Mary Jr Konobo, UNDP

Assessment team

NDC – Andrew Oaego, Thomas Ninkama,
Madang Provincial Administration - Rudolf Mongallee
UNDP – Mary Jr Konobo

Limitations

This assessment was conducted using NDC's recently revised assessment tools. It is the first assessment that NDC has carried out using these tools. A population breakdown of the island by gender and age is not available. Conditions in Kolang and Dangale prevented the assessment team from safely visiting these locations. Some visual assessment could be made from the boat.

This short note has been supported by ACAPS. However, no ACAPS team member was part of the assessment team on the ground.

Summary of key concerns, risks and needs

- Residents of the two most-affected villages, Konlang and Dangale, are unable to return to their homes. It is unknown when return will be possible. They are now living in host communities. The interagency assessment identified the following priority needs for the 164 displaced households:
 - Immediate temporary shelter
 - Household items (cooking utensils, mosquito nets, blankets, clothing)
 - Lighting
- In addition, the team identified the following needs for all affected communities on the island:
 - Medical care
 - Food
 - Clean drinking water
 - Fuel for boats belonging to local villagers supporting the response
- The island's elementary and primary schools are not functioning.
- Healthcare is unavailable and health complaints linked to the eruption have been reported.
- There is no lighting around the settlements, which causes insecurity.
- Communities on Manam have indicated their reluctance to be evacuated to the mainland because of ongoing problems for people evacuated in the past. Many people who relocated in 2004 have yet to be provided with a durable solution to their resettlement.

Methodology

An inter-agency assessment team led by the National Disaster Centre, using agreed NDC information-collection methods, conducted this rapid needs assessment.

The assessment took place in two host community sites (Madauri and Zogari) where residents of two of the most severely affected villages, Kolang and Dangale, have been evacuated. Separate male and female community group discussions took place at each

location, in addition to key informant interviews and direct observations of the assessment team.

The team spent one day (less than 24 hours) on the island on 28 August.

This note presents the findings of this assessment mission and includes secondary data where possible.

Crisis impact and background

Manam is one of the most active volcanoes in PNG. The island is 10km wide and roughly 15km from the mainland in the Madang province.

The most recent eruption occurred at about 6:00 am on Saturday, 25 August, emitting lava, thick mud and ash that affected many villages and forced two villages to relocate to unaffected areas on the island. No lives were lost, but many houses and food gardens have been destroyed.

Since the volcanic activity in 2004, most of Manam's original residents continue to live on the mainland in care centres waiting to be resettled by the government. Some had returned to the island voluntarily and have again been affected by the active volcano.

Although recent population figures for the island are not available, the government estimates that more than 7,000 people, including the population of Manam and the smaller neighbouring island of Boisa, have been affected.

The difference in the impact on Dangale and Kolang compared to the other affected villages was that they were destroyed by lava flow. Heavy ash, thick mud and lava have also caused extensive damage to vegetation and food gardens and contaminated water sources in several parts of the island.

Food People living on Manam were largely self-sufficient in terms of food production. They maintained gardens of vegetables and root crops, kept chickens and fished. No markets were observed by the assessment team on the island and people occasionally travelled to the Bogia district administrative centre on the mainland to buy food and other items. Major damage has been reported to gardens and plantations, for both cash crops and food produced for subsistence, and it appears that next season's harvest will not be possible.

Some food relief has been delivered to the island; this consists of rice, flour, tinned fish and cooking oil. These supplies, combined with the food stock being shared by the host communities, should be able to last for two to four weeks.

The community reports that it mostly needs fresh food, including fruits and vegetables, and protein such as eggs, meat, fish and chicken.

Fishing can continue on the island. However, it is uncertain whether people evacuated from Dangale and Kolang still have fishing equipment, as most of their household possessions were lost along with their houses.

Women from both Dangale and Kolang reported multiple food-related concerns. They say food supplies are inadequate, that the food they can access is not what they usually eat, they lack cooking equipment and utensils (stoves, pots, etc.) and they are unable to grow their own food as they usually would.

While they report not having any money to purchase extra food, they also say marketing options on the island are limited and that distance and travel costs make going to the market on the mainland difficult.

Both communities are already reporting negative coping strategies, such as eating smaller meals and eating less preferred foods. Some household members have left the area in search of work.

WASH: Everyone on the island uses bore water wells for their water needs – drinking, cooking and washing. There are concerns about the quality of the drinking water and no water treatment is employed. While it is clear that some water sources have been buried or contaminated by ash and lava from the volcano, in some cases the water sources may be unaffected, but people fear contamination and diarrhoea is reported as a health concern. Water quality was a pre-existing concern on the island.

Male and female community groups report multiple problems in relation to water:

- Not enough water
- Not enough water storage containers
- Not enough water collection vessels
- Poor water quality
- Accessing enough water for bathing and washing

The two female community groups also said it took too long to collect water (30-60 minutes in Dangale and more than an hour in Kolang), this is the same time it took to collect water before the evacuation.

The NDC assessment team observed that fresh coconuts were available as an alternative source of drinking liquid.

Key informants report the need to cart water to the site to ensure a better supply of safe water for drinking. To date IOM has donated 370 15L water containers as well as drinking water. This will be an expensive solution in the longer term, however, because clean water must be transported by boat from the mainland.

Households on the island usually have their own pit latrine, with open defecation also reported by both male and female groups. In the current situation, the displaced people share the latrines of the communities where they are staying. Male and female community groups all report problems with being able to use toilets at the current location. They report:

- Insufficient number of toilets (so the waiting time to use them is too long)
- Concerns about the lack of separate toilets for men and women (when sharing with strangers)
- Lack of lighting and the difficulty for children and the disabled to use the toilets

Solid waste disposal: No concerns were reported in relation to waste disposal.

Health: No health services are available on the island and no medical services have been provided to evacuees to date. The island has only one health facility, a health centre in Boda village. The assessment team did not visit this facility, but it was reportedly not functioning. People must travel to the mainland, approximately a two-hour journey, to access healthcare.

People report diarrhoea, fever, coughing and sore eyes as their main health problems.

Shelter: People from Kolang and Dangale are now residing in the host communities of Madauri and Zogari. Their living arrangements are a combination of staying in the homes of host families or in tents in the yards of host families or in resting huts. Living conditions are overcrowded, with minimal privacy and inadequate protection from the elements.

Although the current living arrangements appear to have been organised fairly organically, local authorities are beginning to refer them as “temporary care centres”. This indicates recognition that the evacuees and potentially the host communities will require continued external support.

The hosting locations are about 45 minutes by outboard-powered boat from the home villages. They are 2-3 hours’ walk from Bieng Mission (near Boda village), where the schools and health centre are located (none of these are currently functioning).

The host locations lack sufficient lighting and privacy for the evacuees to feel safe, and they offer inadequate protection from the elements.

More than half of the residents of the host communities have evacuees staying with them (either inside their homes or in tents on their grounds).

Female community groups report that their main needs in relation to shelter and living conditions are basic household items and immediate shelter materials such as tarpaulins

and tents. Men add to this list that housing should be more private and give greater protection from the elements.

Education: There is one elementary and one primary school on the island, located in Bieng Mission near Boda village; classes have been suspended indefinitely, however. Children all over the island attended these schools and now have no access to education. Informally, it has been reported that teachers fled the island after the eruption due to fear. This means they are not available even if temporary learning spaces are set up.

There are no reports of damage to the schools or learning materials at the schools (this would need to be confirmed by a site visit or from direct reports). However, it could be assumed that any school books, uniforms or equipment belonging to children from Dangale and Kolang would have been destroyed along with the houses and other possessions.

Livelihoods: Before the evacuation, women spent most of their time collecting water and firewood, preparing and cooking food, working in gardens and plantations, and caring for children. Men spent most of their time working in gardens and plantations, cultivating cash crops and fishing. Since the disaster, the men and women who can be seen are mostly sitting around doing nothing, with women taking care of children. The assessment team reported not seeing many men or women, and it was assumed that they were mostly resting in their huts or preparing for the evening.

Major damage is reported to gardens in Dangale and Kolang. People from these communities cannot work in their gardens because of the damage caused by the ash fall. Some people, usually young men, have returned to their villages and gardens to see if they can retrieve anything. Because the communities relied largely on subsistence livelihood activities and these were closely linked to their gardens and homes, almost all such activities have stopped because of the displacement. Some fishing continues, but in general, community groups report that the eruption and subsequent evacuation hampered the livelihoods of all of the people. They report not knowing at this stage when they will be able to resume normal livelihood activities.

Nutrition and care of young children: Women's CGDs report a decrease in breastfeeding children under the age of 2 following the eruption.

A lack of safe space is reported as an obstacle to the proper care of young children. Assessment teams explained that there was a real sense of overcrowding in the areas where the evacuees are staying and a sense that women felt vulnerable in the unfamiliar location.

Protection: As already noted, the current living arrangements are overcrowded and offer limited privacy. This is considered as a potential factor that could increase gender-based

violence and child-protection concerns. The assessment team also noted the potential for tension and conflict between the host communities and the displaced population who are sharing their space, water and sanitation facilities and, in some cases, their homes. More information is needed to understand the social structures on the island, but it is thought that chieftainship predominates. Under this structure, one or more supreme chiefs would oversee multiple villages, and chiefs under them would lead individual clans. Limited information is available about land ownership on the island.

The Papua New Guinea Defence Force (PNGDF) is patrolling the island to maintain security and the provincial police force was present when relief items were distributed.

The PNGDF, the village chiefs and elders maintain law and order.

There have been no reports of missing children or children not with their usual caregivers. The community groups from Kolang said they did not know if children had been sent away since the disaster or if violence towards children or violence in general had increased.

Key informants report that the ongoing volcanic activity impedes people's movement on the island. Although they mentioned inter-communal tensions during previous evacuations to the mainland, these have not been reported in the current situation.

Humanitarian and operational constraints

The location of the island will affect the timely delivery of humanitarian aid. Logistics must account for the weather conditions, as the island can only be accessed using small boats with outboard motors, which are vulnerable to rough seas. This limits the volume of supplies that can be taken to the island at any one time.

There are no roads or vehicles on Manam Island, so any supplies must be carried from the boats to their destinations.

Helicopter access to the island is possible and the Australian Defence Force made a helicopter available to the response for six days as of 29 August. This was largely used for aerial assessments and senior government officials' visits. The use of helicopters is constrained by the presence of ash in the air, which is risky for aircraft safety.

Ongoing volcanic activity adds to the sense of uncertainty. The assessment team was unable to visit the villages of Dangale and Kolang because of safety concerns. As noted earlier in this report, this round of volcanic activity has affected nine villages. Only Dangale and Kolang have been evacuated so far, but further evacuations cannot be ruled out. The people clearly prefer to remain on the island, but this may not be possible if volcanic activity picks up or if supplies on the island are insufficient and cannot be provided from

the mainland. The impact of hosting the evacuees should also not be overlooked, as the extra population strains resources and infrastructure which, as noted, can lead to tensions.

Aggravating factors

Location, access and communication

The island location is an issue. Humanitarian access is constrained and dependent on good weather conditions.

There is mobile phone network coverage on Manam, and people identify mobile phones, together with word of mouth and information from community leaders, as the most common forms of communication both before and after the eruption. Mobile phone communication is hindered by insufficient electricity to charge the phones and because some people do not have phones (presumably lost along with other possessions under ash and lava).

Land ownership issues

As with other IDPs in PNG, land ownership issues are the greatest constraint to improving conditions and finding alternative safe locations for them to live. They are unable to return to their homes on the island. The community is unable to resume a similar lifestyle in current conditions.

The Manam situation is a long-term concern that has been highlighted and exacerbated by this recent increase in volcanic activity. The recurrent challenges faced by the islanders will only stop when they can be permanently resettled in a new location with unhindered access to land for homes and gardens. Displaced communities have indicated their reluctance to be evacuated to the mainland because of continual conflicts with owners of the land on which the care centres have been established. This impacts living conditions, including access to food gardens, coconuts and fish. Until permanent resettlement can occur, the people of Manam will be largely dependent on relief.

Response capacity

Local and national response capacity

The National Disaster Centre (NDC) is the national mandated agency that coordinates assessments and relief operations for disasters.

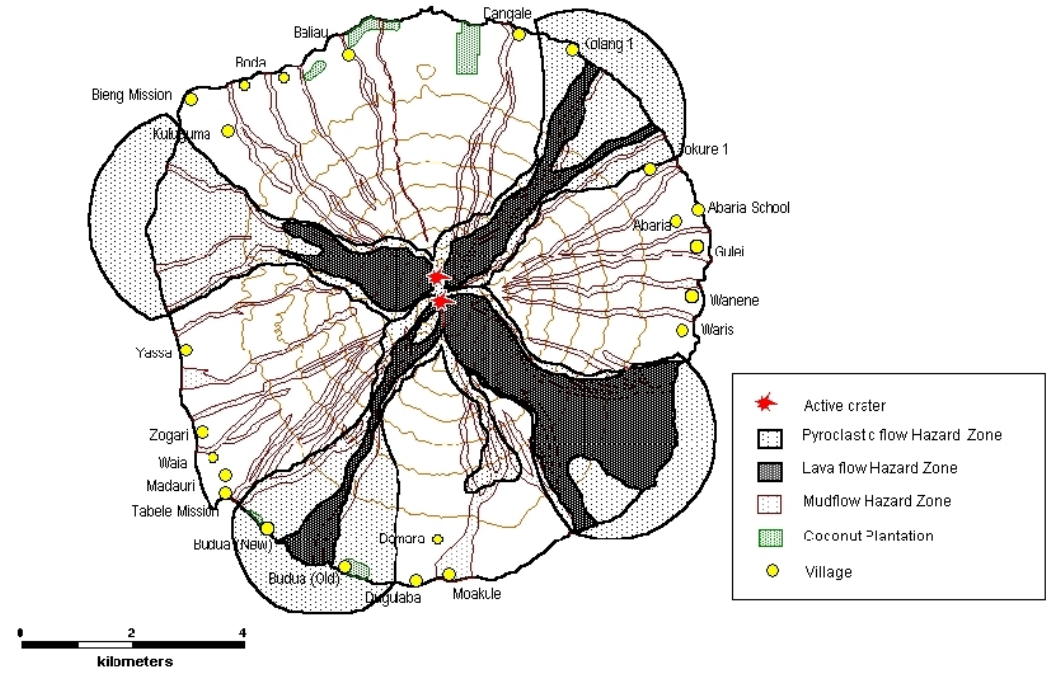
The Provincial Disaster Coordinator (PDC) is the appointed provincial administration official who is responsible coordinating the provincial administration's disaster response efforts. The PDC directly supports the Provincial Administrator in his/her role as the Chair of the Provincial Disaster Committee. The PDC is expected to coordinate closely with the NDC to ensure the provincial and national responses are integrated.

The joint inter-agency Disaster Management Team (DMT) comprising UN agencies, NGOs, FBOs, the Red Cross and the private sector, is co-chaired by the Director of the NDC and the UN Resident Coordinator. It functions as the local Humanitarian Country Team to coordinate relief efforts of humanitarian partners. Seven informal clusters (WASH, Shelter, Food Security, Health, Protection, Education, Nutrition) support the work of the DMT.

Relief assistance has been received at the site. So far, this has included:

- Food distributions from the Madang province and Bogia district authorities
- PNGDF has deployed troops and a medical team to assist with relief operations.
- Water containers and drinking water from IOM
- The ADF has provided one helicopter and crew to support relief
- PNGDF has assigned a patrol boat to remain at the island to assist with movement of relief items and communications.

Map



Source: Papua New Guinea, National Disaster Centre

Photos of Manam Island

