



CYCLONE ABIGAIL: MARCH 2001

MORNINGTON ISLAND

Post Impact Survey

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POST DISASTER STUDY-MORNINGTON ISLAND

Eddie McLachlan, a PhD student with the School of Indigenous Australian Studies and the Centre for Disasters Studies at James Cook University, carried out a brief post-cyclone study on Mornington Island between 19th and 23rd of March this year.

The purpose of this trip was to make initial contact with local people on Mornington Island and conduct a questionnaire survey in the community. The questions in the survey were in relation to cyclone Abigail which passed over the island and the main township of Gununa, on Monday 26th of February 2001. It was hoped data from the survey would provide information about what action local residents and authorities took before and after the cyclone struck. Also as the survey was being undertaken, it was hoped that the student could establish contact with local community identities in anticipation of further work within the community later this year.

This fieldwork will ultimately form part of a larger PhD research project, and it is hoped if appropriate, data from this report will be incorporated into the student's thesis. The project entails examination of the qualities and virtues of survival and endurance that form a part of the preparedness and recovery in remote communities during times of disaster. The experiences, attitudes and cultural values of the indigenous people are of primary concern in identifying and improving appropriate educational, preparation, shelter and evacuation strategies. The previous experience and history of the cyclone impact is as important a part of the study as the recording and measuring of awareness and preparedness for future events.

Mornington Island

Mornington Island is an isolated community, located in the Gulf of Carpentaria, approximately 125km north west of Burketown, 200km west of Karumba and 444km north of Mt Isa. It comprises an area of about 700 square kilometres, and is the largest of the twenty-two islands which form the Wellesley group in the Gulf. Located in the southern half of the Carpentaria Gulf, reasonably close to the mainland, at a glance geographically, the island appears to be in a relatively sheltered position. However this is not the case as over the years Mornington has felt the direct effects of numerous tropical cyclones and has been consistently exposed to extreme weather conditions from cyclones in the vicinity. The reason for the island's vulnerability is that its location is in an area that is subjected to the forces of the seasonal monsoon activity that occurs in the north of Australia during the annual wet season period. The island is also flat, there are no mountain ranges or other significant geographic features to take the full force of strong weather conditions. Located on the south side of the island, Gununa is sheltered somewhat by the island's landmass from the winds of northerly storms, and Denim Island offers some protection from winds blowing from the south. However, the town would be extremely vulnerable to a cyclone coming in from a westerly direction. The island has a population of about 1200, most of who are indigenous and reside in the main township of Gununa which is on the southern side of the island.

Since the early part of this century, Mornington Island had been managed under the provisions of the Queensland Aborigines Act by the Uniting Church. A Presbyterian mission with a school was established in 1914, and four years later a dormitory system was set up for the children attending school. A few of the missionary buildings are still standing, the

guesthouse is in fact the old missionary's residence and a community library is housed in what was the old church building.

After protesting against the Queensland Government's decision to adopt control of the island in 1978, the community, with support of the Commonwealth government, reached an agreement with the state government for self-government via a local authority later that year. Under this self-autonomy, the community developed a series of enterprise activities including cattle farms, bakery, handicrafts and a guesthouse. These days there are many community services which were initiated and are managed by locals and provide employment to a number of residents. Public utilities in Gununa are well developed with reticulated power, water, sewerage and storm water drainage. Education to junior secondary level is available, but there is no access to TAFE or tertiary education. The majority of people are employed in tertiary (community services) areas. The Momington Shire Council provides the bulk of the work for most of the men, through general labouring jobs and other specialised services such as machinery operators and truck drivers.

Cyclones

Stories from elder residents attest to cyclones being a frequent event, and they have become regarded as a part of the natural cycle of the Momington lifestyle. Indeed, the elder residents who took part in the survey spoke of past cyclones and pointed out that Abigail was not one of the most destructive that has hit the island. According to the elders and others, the last relatively recent cyclone to cause significant damage was Ted in 1976.

Queensland Bureau of Meteorology records showed that on 16th December 1976, cyclone Ted developed in the northern reaches of the Gulf of Carpentaria. It moved south-west, then changed direction to south-east which put it on a course to hit Momington Island on the afternoon of Sunday 19th, and then crossed the coast near Burketown that evening. Extensive property damage estimated at about \$8 million, was caused at the Momington and Burketown communities. Although 700 people on Momington were left homeless, fortunately no-one lost their lives or sustained serious injuries. Houses in the old village that was situated along a low sandy shoreline section of the settlement were constantly subjected to annual flooding. As a result, new residential buildings were built on the higher ground where they now stand today.

Cyclone Abigail

On Saturday 24th of February this year at around 10am, cyclone Abigail formed 60km east-northeast of Cairns in the Coral Sea off the north Queensland coast. It proceeded westward and crossed the coast as a category 1 Cyclone 30km northwest of Cairns at approximately midday on the 24th. After reaching land, Abigail weakened into a rain depression and moved westward overland as a low until it reached the waters of the Gulf of Carpentaria about twelve hours later. Once it reached the warm waters of the Gulf, the low system intensified, and at 5am on Sunday 25th of February, Abigail reformed into a category 1 cyclone 120km northeast of Momington Island and was observed by weather authorities to be heading towards the island. Before it reached Momington it deepened further into a category 2 storm, and at around 7pm that evening, the eye of tropical cyclone Abigail passed over the island township of Gununa. Shortly after it passed Momington, the cyclone rapidly intensified once again to a category 3, but when it crossed the coast near the Queensland-

Northern Territory border at about 2am, February 27th, it had weakened to a category 2. After reaching land, Abigail decreased to a rain depression and moved further inland to the Northern Territory and eventually dispersed. A couple of residents noted that after the eye of Abigail had passed over Gununa, the winds coming from the opposite direction appeared to be noticeably stronger. This was confirmed later by weather authorities as their instruments showed that almost immediately after crossing Mornington, Abigail rapidly deepened to a category 3 cyclone. Those who did notice the increase expressed some concern that perhaps the official warning system had underestimated the cyclone intensity.

Warnings

Mornington Island receives advice on natural disaster procedures from the District Manager's office of the Queensland Counter Disaster and Emergency Services, which is based in Mt. Isa. The office covers most of the area in the lower Gulf of Carpentaria, including Burketown, Doomadgee and Mornington Island, and over the years a system of disaster preparedness and recovery, with Mt. Isa as the base, has been established. State, and local governments, as well as the local community councils are involved.

The majority of the residents received information and warnings about cyclone Abigail from household radios and television, and these people also informed family and relatives who did not have these facilities about the cyclone's movements. Most people interviewed said that not enough local information was given in the official warning messages before the cyclone impact period. However, the ratings for television and radio warnings broadcast by the Bureau of Meteorology were rated mainly fair to good, as were the emergency services during the storm.

Preparations/ Previous experience and length of residence

Due to local knowledge, most residents expected a cyclone to either pass by or hit Mornington this year, while those not from there, mainly non-indigenous workers, expected it because of the physical location of the island. Consequently, the majority of people had made some pre-cyclone preparations but there were some who waited until it was certain that Abigail was heading towards the island before they reacted, and implemented disaster precautions like buying tinned food and candles, storing water and cleaning yards of loose rubbish. Those people who felt their houses would not be safe, moved into relatives whose buildings were considered more secure for the duration of the storm, then returned home after Abigail had passed.

Most long-term residents did not expect a storm surge to affect the town, because the cyclone approached from the opposite side of the island. It was felt by some with local knowledge that when cyclones and storms approached from the north, their winds do lose some strength on initial impact with the coastline, and is further weakened as they move across the island's landmass. Given these circumstances it would also be logical to assume that the sea surges caused by cyclone winds primarily affected the northern shores and would have little if any, impact on the southern parts of Mornington.

Cyclone Damage

None of the residential houses in town suffered any serious structural effects. The most damage reported was confined to rooftops, where breeze-catchers and aerals were blown off, and some solar panels were broken. The most common damage to most properties was trees in the yards losing leaves and branches and in some cases being blown over, and there were several houses where water was blown under doors and through windows causing problems with electrical goods and floor coverings. There was one building which suffered fairly extensive damage, but it was a public facility, and fortunately at the time it was not occupied, as everyone were in their homes. It appeared to have been the subject of a freak gust of wind, which can happen during cyclones.

All the residential houses lost power and water for some periods of time, ranging from a couple of hours, to in some cases, two days. Few of the residents complained about the unavailability of electricity because they perceived it as a normal event during the cyclone season.

The estimated damage for property was placed at approximately \$245,000 for Momington Island, and fortunately there were no lives lost or serious injuries reported. From surveys, most people would have evacuated their homes if told to by authorities. Most would have preferred to move into a relative's place that was in a safer location, or to a recognised evacuation centre. One non-indigenous worker expressed a wish to be flown to Normanton on the mainland, if the cyclone was particularly strong and people were asked to evacuate.

Most residents agreed that cyclone Abigail tended to bring the community together, especially family groups. For various reasons some residents stayed with relations to sit out the storm and that time gave them the opportunity to talk and generally catch up with family matters. In the clean-up process afterwards, people helped each other clearing yards and talked about how they fared when the storm struck.

A few people said there should be more local people involved with the SES service and that the clean up afterwards could have been more organised. There were some complaints about shortage of some of the equipment used in the cleaning up process, but overall, the people agreed that the tidying up process by the local authorities was carried out effectively.

General comments and observations

Due to its geographic position and climatic conditions, Momington Island is always going to be affected in some way by major weather disturbances in the Gulf of Carpentaria. This circumstance applies especially during the summer months- November to April- when the monsoon activities are prevalent in the northern part of Australia. Records show that Abigail is not the only tropical cyclone that has struck Momington after crossing the Cape York Peninsula from the eastern coast. There have also been occurrences when the circumstances have been reversed, with cyclones forming in the Gulf and heading over to the Coral Sea. The island itself is in a vulnerable position, but the main township of Gununa is relatively protected by its location. Local people say that strong winds associated with storms or cyclones lose some of their initial power when they reach the settlement site, if they approach from the north, more so especially from the northeast.

In times of need such as those caused by the effects of a cyclone, people tended to rely on each other, and this becomes prominent in the Momington community where indigenous family groups and kin ties are maintained. People moved into kin's houses that were considered sturdier, and they felt safer when gathered in the one place as a family group or people they are related to.

In conversation, an elder of the Aboriginal people who was born and raised on Momington expressed a desire that perhaps someone should record traditional stories and experiences of the older indigenous people on the island. Further talks established that the person had experienced a number of cyclones while on Momington, and cyclones were talked about as a way of life on the island. The elder also related stories about times that were spent as a youngster living on the island when the mission was established. This person's memories of events and places were quite clear, as the site of the old mission vegetable garden was pointed out, and other details were provided, such as a frangipani tree at the rear of the missionary's house, and the recollection of bells being rung as a cue for the children to do certain activities.

An architect is employed in the office of the Wellesly Islands Aboriginal Corporation, and is working with the outstations program where he supervises the erection and maintenance of buildings on site. The person designs and oversees the construction of these buildings that are located on ancestor's country on various sites around the island. Most of the indigenous owners of the outstations also have houses in the town, and usually go out to the other place to spend time with family and practice cultural activities like hunting and mostly fishing. A lot of the outstations have permanent residents who are family of the owners in town, but who want to be away from the town lifestyle. They are connected by two-way radio to the town and can be reached by four-wheel drive vehicles by dirt roads. However, during the wet season the tracks become inaccessible, and for several weeks the outstations are isolated except by radio contact. Several could still not be reached by vehicle weeks after cyclone Abigail due to the wet conditions caused by the associated rain. Part of the architect's job is also to decide which building materials are best suited to conditions on Momington and then organise the orders for their purchase and delivery. It is a somewhat complicated task considering the remote location and the costs of delivering at times bulky items, such as water tanks. A tour was conducted of the nearly completed new cultural centre which was constructed with the help of local people. Two days work was lost during cyclone Abigail because of windy and wet conditions. The building is a unique hexagonal

shape, designed to cope with local weather conditions while at the same time fulfil its primary function as a storage centre for displays of traditional Momington cultural artefacts and records.

The longer people live in a place, naturally the more they adapt to the natural surroundings. The people born and raised on Momington Island know that every wet season there is the likelihood of experiencing a cyclone. From years of observation and participation they have learned that when the first monsoon storms arrive, it is time to begin pre-cyclone preparations. With regards to official warnings and interpretation, perhaps there could be some assistance from local authorities. For instance maybe SES personnel could give talks or seminars to the local population on how to interpret the synoptic maps and satellite images which are shown on television.

There are a number of issues derived from the fieldwork experience and the consequent analysis of the data that was gathered. The importance of making contact with the appropriate person or people, in a community such as Momington is a subject that the investigator was made very aware of from an early stage. Upon arriving at Momington a meeting was arranged with the Chief Executive Officer of the Momington Shire Council, at the council office. The purpose of the visit and possible methods of conducting the survey was discussed. Almost all the males were employed by the shire council or worked on the CDEP program, and with this in mind it was considered inappropriate to visit houses when there were only women and children at home. A proposed solution was to have a local well-known identity to accompany the researcher around the community. Unfortunately, there was also a funeral on the next day, which naturally, was unanticipated. It was thought that in a closed small community such as Momington, it would be extremely insensitive and inappropriate to go to people's houses and ask questions on this day. When the time came to leave the island, the student had made several useful contacts with locals and these will be extremely helpful in further investigations. Making those contacts while conducting fieldwork, the fieldworker can learn how individual remote communities operate socially and politically, which can be beneficial to both parties.

Despite the distance between Momington Island and the nearest major disaster control office 444km away in Mt. Isa, disaster preparedness and recovery procedures appear to operate well in the community. The District Manager stated that over the years the residents have incorporated disaster management procedures into their lifestyle, and this was probably the reason there was relatively little damage caused by cyclone Abigail.

Recommendations

The fieldwork visit by the researcher was limited, consequently there was relevant associated data that could not be collected. Discussions with an elder in the community indicated a desire for stories from the older residents to be told and recorded. Information from interviews conducted, indicate it is likely these stories would contain references to cyclones. Most traditional Aboriginal stories contain a mythical element, so Momington Island narratives are worth investigating to see if there are spiritual links with cyclones and the people. Also, do these traditional stories about cyclones have any influence on hazard preparedness, vulnerability and mitigation strategies in the Momington community? With this premise, it is recommended the student seek an extended stay on the island to interview

elders and record their narratives. This information could be stored in the cultural centre mentioned above, so it is kept in the community for local reference, and if permitted, may also be displayed for public viewing as part of the history of Mornington Island.

A resident raised a theory that perhaps the sea grass in shallower dugong feeding waters around the island may have been subject to some removal by rough sea conditions from cyclone Abigail, and consequently a shortage of this traditional supplementary food source. There was speculation whether this may have caused a change in the diet of the people who still eat dugong and sea-turtle, and if the effects were significant to their health and lifestyle. This is an interesting question worthy of further investigation.

The details of the various levels of disaster management also need to be examined further, as do numerous social aspects associated with disasters in a remote community. These include:

- ?? The role of local people in disaster emergency situations
- ?? Examination of any interpretation problems by local indigenous people of official broadcast warnings, and how these are addressed.
- ?? How information from the Disaster Management office in Mt. Isa is distributed to a remote community such as Mornington.
- ?? The role of local authorities, i.e. SES and local councils.
- ?? Any health problems caused by flooding and associated aspects such as sewerage overflow, and shortage of food and clean water.

Conclusions

As mentioned above, it is envisioned data from this report will be incorporated into a PhD research project. Hopefully it will supply information which can be used to measure the extent to which vulnerability, awareness and preparedness are different in remote and predominantly indigenous communities. It is hoped that from the recorded experiences of vulnerability, awareness and preparedness studies, researchers will be able to identify the strengths and weaknesses in the disaster planning and preparedness aspects of the community. This will enable the study to contribute to individual community strategies, while at the same time compiling data on small and remote centres as a group. Ultimately it is anticipated this study will provide a model of community based data collecting, dissemination and co-operative education, which will have applicability to other small and remote communities in the north.

From the impact of Abigail, the community of Gununa on Mornington Island did not suffer major property damage, harm to residents, or experience any serious effects usually associated with cyclones. Officially rated a category 2 by the Bureau of Meteorology when it struck the township, the lack of excessive damage caused by the storm may be attributed directly to the disaster management strategies employed by the community. Should this be the case, perhaps other remote communities in the Gulf of Carpentaria could examine the strategies used on Mornington, and adapt them to utilise in their particular area.

SUMMARY OF MAJOR IMPACTS

Most residents got information and warnings about cyclone Abigail from radio, television and family.

When it became clear that the cyclone was going to strike the town, people tended to gather in family houses that were seen as the strongest construction-wise. They may have been crowded, but they only had to stay until the cyclone blew over-two to three hours at the most.

Through experience, all local people expected a cyclone to either pass by or hit Momington this year, while those not from there, mainly non-indigenous workers, expected it because of the physical location.

Because they were expecting a cyclone, most residents had made some preparations but some waited until it was confirmed it was heading towards the island before they brought tinned food and candles, stored water and cleaned yards of loose rubbish.

From experience, most residents did not expect a storm surge to affect the town, because the cyclone approached from the opposite side of the island. In fact the state of the tide had more to do with it.

None of the houses in town suffered any serious effects. Minor household damages were reported such as losing breeze-catchers and solar panels. The major damage to most properties was trees in the yards losing leaves and branches and some being blown over.

All the houses lost power and water for some period of time, ranging from a couple of hours to two days.

From surveys most people would have evacuated if requested to, preferably to an evacuation centre.

Most people said that not enough information was given in the official warning messages before the cyclone impact period

The ratings for the warnings put out by the Bureau of Meteorology were rated mainly fair to good, as were the emergency services during the storm.

Most residents agreed that the cyclone tended to bring the community together, especially during the clean-up afterwards. People helped each other clearing yards and generally talked about how they fared when the storm struck.

BUDGET

Cost of airfares----- \$1063.23

Cost of accommodation - \$225

Cost of meals-----\$48.30

Cost of incidentals-----\$100

APPROVALS

Approval for the survey to take place has been given by:

Ian Ogden, CEO Mornington Shire Council

Lesley Galloway, Director of Policy and Research, Department of Emergency Services,
Queensland

Syd Churchill, Regional Director, DES, Cairns

Ron Crawford, SES Controller, Mt. Isa

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