



Mata Mata

About this Case Study

Mata Mata is a homeland community located in the beautiful and remote coastal area of East Arnhem Land in the Northern Territory. Bushlight started working with the residents of Mata Mata in September 2004 to discuss their energy needs, their future aspirations and how reliable renewable energy (RE) could assist. In October 2005, a Bushlight RE System was installed in the community. This case study is about Mata Mata and what it has meant to residents to have reliable 24 hour power.



The rich natural environment around Mata Mata of East Arnhem Land

Mata Mata Community

East Arnhem Land is home to the Yolngu people. The environment comprises a rich mosaic of crystal blue waters with sandy coastlines, and numerous rivers winding through vibrant green forests and wetlands. Mata Mata lies just meters off the coast and is also close to river and swamp country. The residents of Mata Mata are well resourced by nature, and have ready access to plenty of fresh food. The community is very remote, being a 3 hour drive by road from Nhulunbuy, and accessible only by air during the wet season. Their Resource Agency, Marthakal, is based on Elcho Island so is only accessible by charter flights.

Upon arriving in Mata Mata, a single engine plane lands on the red dirt airstrip with the crystal blue ocean in view just ahead. The guests are warmly greeted by residents, particularly Phyllis Batumbil, who is a Traditional Owner and the main spokesperson for the community. She is an active and forward thinking Yolngu woman who happily shares stories about Mata Mata as she is keen for other people to learn about Yolngu country and people.

The Yolngu people at Mata Mata hunt and collect much of their own food, including a lot of seafood

Bushlight's Community Energy Planning Model

Bushlight's objective is to improve livelihood choices for remote communities by increasing their access to reliable energy services. To do so, Bushlight works directly with community members to provide them with independent advice and information about choosing which energy services are best for them, and advice on demand side management, and energy conservation. Using a range of pictorial resources, Bushlight invites communities to consider how they use energy and how much it costs them; and with them, look at what options are available for improving their access to reliable energy services.

Through workshops and community mapping exercises, Bushlight works with residents to prepare Community Energy Plans (CEPs). These plans detail the community's current energy needs as well as any future livelihood aspirations. The CEP documents an agreement between Bushlight and the community by setting out household energy budgets and the roles and responsibilities of the community in using and looking after their solar power system. The responsibilities of Bushlight, the community's service agency, and the system installer are also laid out.

After the initial CEP meetings and completion of the system design, Bushlight coordinates the installation of the RE equipment. Following installation Bushlight provides education and training in system operation and maintenance over several visits during the course of the first year. Bushlight's approach elaborates on the typical RE industry process by involving the community in all key activities and decisions.

– “we're saltwater people, we eat saltwater food”. Another dietary favorite is yams, a native root vegetable which are cooked in hot coals in the ground.

As well as being well resourced by nature, Mata Mata also has the infrastructure to provide important services such as a school and a clinic. The school is a 'both-way' learning school, meaning students learn in both English and the local language “Gamatj”. A nurse visits the clinic once a fortnight from Marthakal Health (on nearby Elcho Island) and people from surrounding homelands come to Mata Mata at this time to utilise this service.



Mata Mata School

History

Mata Mata was first established in 1942, when Yolngu people came to the area to build an airstrip. Phyllis's father was amongst the first

people to come to Mata Mata, and he erected the first building, a hut in the same place where the school is now standing. He told Phyllis and the family that building the hut was like planting a seed, and in that seed he was saying “look after this place”. That seed has grown and flourished, and become a healthy and lively community.

The hut is no longer there, but in its place is the school, named after Phyllis's father as it was built on his foundations - “Gatirri School”.

Phyllis has lived in Mata Mata her whole life. She says “I like most to be out here, my homeland. More peaceful, more quiet, no worries”. When she was a child, her community had no access to electricity at all and there were no cars or boats



Phyllis Batumbil, Community Leader and Traditional Owner of Mata Mata

as there are today. In the early days, residents were entirely self sufficient and hunted and gathered all their own food. At this time Phyllis' family traveled by dug out canoe.

Bushlight and Mata Mata

When Bushlight first started working with Mata Mata the community relied on an 18kVa generator for power. It was run for an average of 15 hours a day, which cost residents more than \$10,000 a year in diesel, as well as \$300 a week to charter a fuel plane from Elcho Island. The school and one of the houses had solar systems installed at some earlier stage, but when Bushlight arrived these hadn't been working for a long time.

Before the Bushlight system was installed, Bushlight staff undertook Community Energy Planning (CEP) with the residents. Bushlight spoke to residents about the appliances they use, and how long they are used for each day. Together they created a vision of how the RE system would be designed, so that each building

had enough energy to meet its requirements. It was decided the Bushlight RE system would be connected to all existing buildings, which consisted of 5 houses and the school. The clinic had not been built at the time of CEP and it was not included in the system design.

When asked about their aspirations for the future, residents wanted to improve their services and save money on diesel. They also spoke about the need for more houses, a clinic (which has since been built), and a shower and laundry block.



Ken Aitchison from Bushlight undertaking system training with Mata Mata residents



Johnny and Phyllis drawing a map of their community during Community Energy Planning

After the Bushlight system was installed in October 2005, there were some initial teething problems. There were faults in some of the Energy Management Units (EMU's) and the energy budgets were resetting, causing residents to lose power. In addition, the generator was being used excessively. It was not clear whether this was because residents were using 'energy hungry' appliances or they were using the generator unnecessarily. Bushlight sent electrical contractors to fix the problems. Bushlight staff made several visits in the first year to deliver training sessions to ensure that all residents understood the best way to manage their energy and minimise generator usage.

Many of these initial problems were sorted out in the first year. Residents are now very happy with the system and say the power is "running perfect"; "with solar we are sitting quietly". Even with all the rain and clouds in the wet season, the community is not running out of energy. After living with the Bushlight system for three and a half years, residents have an in depth understanding



Tig Armstrong from Bushlight talking to residents about types of fuel

of energy management and can carry out any basic troubleshooting tasks as required. They also take great pride in the Bushlight system, ensuring the array area is always mowed and cleared of weeds, the panels are kept clean and the inside of the Bushlight shed is tidy.

The impact of reliable energy services

For Mata Mata residents one of the key positive outcomes relating to Bushlight's work in the community is that they no longer have to negotiate diesel usage with their Resource Agency, Marthakal. In February 2009, they reported that there is "no more arguing now, quiet". The other big impact is the money they save, not only from diesel and the cost of flying it in, but also from making fewer trips to town in the plane to buy food. Now they have reliable energy 24 hours a day, they can keep food fresh in their fridges and freezers including the fish, oysters, clams and turtles that they catch.

It is obvious from the comments of residents that the Bushlight RE system has helped to make Mata Mata community a much easier place to live. Without the noisy generator and hassle of obtaining diesel, living in Mata Mata is now very peaceful and quiet, cheap and "better than town".



Phyllis knows her way around the Main Control Panel of the Bushlight system

Looking to the future

With the availability of reliable power, residents are able to continue to plan for further development in the community. Phyllis would like to establish an art and craft business, mainly to sell to an international audience over the internet. She will need her own office space, with high speed internet. A new building is being built in Mata Mata in mid 2009, and Phyllis anticipates

using this for her office. As well as an office, she envisages having a workshop space for creating art and craft. The men and women will have separate areas to work and it will also be a learning place for children. Residents plan to sell paintings, mats, baskets and the men will make didgeridoos.

Phyllis has several plans involving tourism enterprise development. She would like a reception area in the art building, with a gallery for tourists to view and purchase the art. Ultimately, establishing tourist accommodation is also on the cards. Residents have identified a number of cultural activities that would be of interest to the national and international tourist market, these include art (painting, weaving, and bead work), collecting pandanus and canoeing.

Phyllis already has many skills in business management since attaining a Diploma of Business and Administration, from the Bachelor Institute of Indigenous Tertiary Education near Darwin. This qualification along with her forward thinking and highly motivated character, will give her a good head start in running a successful business.

Phyllis hopes that Bushlight will be able to help with the business, by providing additional energy to the new building, and assisting to access the internet. Bushlight will continue to work with Mata Mata residents. They are very happy with the way that Bushlight have worked together with Yolngu people, teaming together to look after the system. The Bushlight solar power has been "maynmuk!" (good!).



Bushlight staff with the residents of Mata Mata