



April 2018 –
March 2019

Annual Report



Prepared by: NZMATES PMO

Prepared for: NZ MFAT

April 2018 – March 2019



Annual report #1
17 April 2018 – 31 March 2019

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Cover photo: Dusun Haya, potential location for a new solar mini-grid in the NZMATES pipeline.

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List of acronyms

ADB	Asian Development Bank
AFD	Agence Francais de Developpement (French Development Agency)
DJ EBTKE	Direktorat Jenderal Energi Baru Terbarukan dan Konservasi Energi (Directorate General for New and Renewable Energy and Energy Conservation)
Dinas ESDM	Dinas Energi dan Sumber Daya Mineral (Energy and Mineral Resources Agency)
FOP	Forward Operating Plan
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Development Agency)
HSS	Health, Safety and Security
LOP	Life of Programme
MEL	Monitoring, Evaluation and Learning
MFAT	Ministry of Foreign Affairs and Trade
MMU	Maluku dan Maluku Utara (Maluku and North Maluku Provinces)
NZMATES	New Zealand – Maluku Access To Renewable Energy Support
PDPC	Partnerships and Development Practice Coordinator
PLN	Perusahaan Listrik Negara (National Electricity Company)
PM	Programme Manager
PMO	Programme Management Office
PSG	Programme Steering Group
RE	Renewable Energy
Renstra	Rencana Strategis (Strategic Plan)
RUED	Rencana Umum Energi Daerah (General Provincial Energy Plan)
TC	Technical Committee
YMCI	Yayasan Mercy Corps Indonesia

1 EXECUTIVE SUMMARY

This annual report corresponds to the first year of the NZMATES programme, from the programme start date (17th of April 2018) to 31st March 2019. As this was the first period of programme activities, there was a focus on set-up and establishment of the Programme Management Office (PMO), including recruitment, procurement and policy development, as well as stakeholder engagement, especially with key programme partners. Significant progress is also reported on Programme Framework reports. Pipeline activities are still in the early stages, however the workplan developed for the coming year includes an exciting mix of projects and locations. This report outlines progress towards programme outputs, and comments on early progress towards short-term outcomes as well.



Figure 1: The NZMATES Programme team with Yayasan Mercy Corps Indonesia support staff in Ambon

2 KEY ACHIEVEMENTS AND PROGRESS

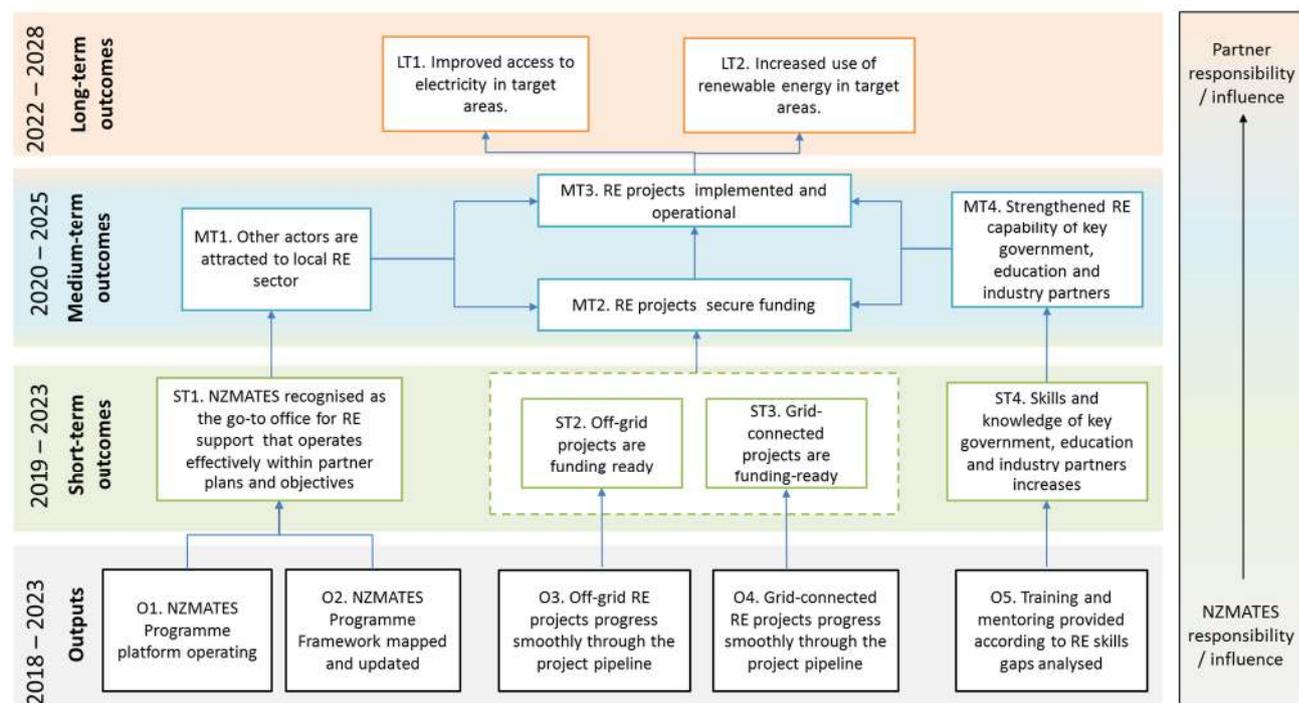
Results framework

NZMATES has updated its results framework this year after consultation with MFAT and key partners (Dinas ESDM and PLN). The refreshed results framework is easier to communicate and understand, and better outlines the expectations around timing and changing responsibility and influence between the different outcome levels. The main changes are:

- New long-term outcomes which better reflect the bigger picture of what NZMATES is trying to achieve – changes in energy access and use of renewable energy in target communities.
- Project pipeline results chain now includes a short-medium term outcome (RE projects secure funding), which leads on to a long-medium term outcome (RE projects implemented and operational).
- Slight changes in wording to improve clarity of some other outcomes and outputs.



Goal: support the uptake of affordable, reliable, and renewable energy in off-grid and grid-connected areas in Seram and surrounding islands, Maluku Province



Output 1: Programme Platform Operating

Focus for the first year of NZMATES implementation has been on establishing the programme platform, consisting of the physical office in Ambon, the programme team of specialists, the policies and procedures needed to operate smoothly and effectively, and the stakeholder engagement and governance structures to ensure there is suitable buy-in from partners.

Programme Management Office

No.	Indicator	FOP 1	FOP 2	LOP ¹ target
01.1	Qualified PMO team in place	No	Yes	Yes
01.2	PMO has sound, relevant procedures and policies in place, approved by Programme Manager and updated annually.	No	Yes	Yes

Establishment of the NZMATES Programme Management Office began with the relocation of the Programme Manager (PM), Mauricio Solano-Peralta, and Partnerships and Development Practice Coordinator (PDPC), Kitty Garden, from Infratec’s offices in Wellington to Ambon (mid-May 2018). The PM and PDPC spent one week at Mercy Corps Indonesia’s head office in Jakarta familiarising themselves with MCI’s policies and procedures, followed by three weeks in an intensive Indonesian language course, before moving to Ambon (mid-June 2018).

The PMO in Ambon is located in the existing Yayasan Mercy Corps Indonesia (YMCI) Ambon field office, where an existing Administration, Logistics and Procurement Officer and a Senior Finance Officer provide part-time support to the NZMATES programme, along with a team of operational support staff including driver, security staff, and cleaner.



Figure 2: NZMATES staff prepare community mapping tools in the PMO.

Six full-time NZMATES programme staff were recruited during the first year of operation: Local Stakeholder Engagement Specialist, Safitri Y. Baharuddin, Deputy Programme Manager, Meihaar Josiano Marsaoly, two Community Engagement Officers, Isra Amin Ali and Marie Irene De Fretes, and two Renewable Energy Specialists, Munawir S and Johannes Smith Sormin.

Overall, the recruitment process proved more time-consuming than expected, and several new staff members were not available to start work with NZMATES as early as hoped. This has led to some delay in programme activities. However, the calibre of candidates was higher than originally assumed. There is also a high representation of new staff originally from Maluku and with previous experience working in Ambon and Seram. Out of six programme staff, four are from Maluku, including two from Ambon, one from Seram, and one from Banda. The other two staff members bring significant experience from renewable energy projects in other parts of Indonesia.

Procurement of equipment to set the YMCI Ambon office up for NZMATES operations was also a priority during the programme’s first year and was more time consuming than expected. This included procuring

¹ Life of Programme target – target for end of NZMATES programme in June 2023

office and IT equipment, as well as field gear and a 4x4 field vehicle. While procurement of some items proved challenging due to Ambon's remote location, the PMO is now suitably equipped for the growing team.

Finally, policies and procedures were set up to enable the NZMATES team to work effectively. An Implementation Plan was developed to establish procedures for key tasks like reporting, requesting budget modifications, and work planning. A detailed Communications and Stakeholder Engagement Strategy and Plan was also developed to provide a framework for managing the different levels of information-sharing and engagement required with NZMATES' many partners and stakeholders. At the time of writing this report NZMATES is recruiting a Communications Officer to oversee implementation of the Plan and keep it up to date.

As part of establishing the programme's visible presence and brand identity, an NZMATES-specific logo was developed for use on business stationery and communications material. This helps external stakeholders to recognise NZMATES staff – employees of both YMCI and Infratec Ltd. – as a single team.

A bilingual NZMATES website has been published, a presence was established on social media platforms, and dissemination material such as written programme summaries and PowerPoint presentations were developed for use in stakeholder meetings or public events.

Health, Safety, and Security (HSS) are key concerns for NZMATES, and the team has built on Infratec's strong Health and Safety Focus and Mercy Corps' excellent Security expertise to build a set of tools and policies to ensure NZMATES activities are based on sound risk assessment and management practices.

A consultant was hired to conduct a Security Vulnerability Assessment in Ambon and in field locations on Seram Island, and a suite of documents were produced, including a site-specific Health, Safety and Security Plan, as well as Standard Operating Procedures, guidance documents, forms and templates.

The field and office teams have undertaken first aid training by the Indonesian Red Cross and further training will be procured in the second year to ensure all critical aspects of risk management are covered.



Figure 3: NZMATES team members are trained in marine rescue techniques by the Indonesian Red Cross.

Monitoring, Evaluation and Learning

No.	Indicator	FOP 1	FOP 2	LOP target
01.3	Results framework reviewed annually and endorsed by PSG.	No	Partial	Yes

As mentioned above, NZMATES has refreshed its results framework. In addition, the indicators for each level of output and outcome have also been updated to better capture meaningful progress while ensuring that monitoring can be done smoothly and efficiently.

A detailed indicator plan was developed in collaboration with Mercy Corps MEL specialists, and the development of data tracking and analysis tools has begun.

Due to delays in the establishment of the programme's governance structures (see Stakeholder Engagement and Programme Governance section below), the results framework was not able to be formally endorsed at the Programme Steering Group meeting as intended, which is why progress against the indicator is reported as 'partial'. However it was decided that MEL activities should continue nonetheless, and the contracting process for a baseline survey has begun. This is delayed relative to the original plan, however it will be better targeted towards actual project locations that have been proposed as part of the project pipeline.

The next year will see the completion of the baseline survey, and the embedding of MEL systems and processes. The first team reflection meeting will be held at the end of the second Forward Operating Plan (FOP) period, and monitoring data and progress to date will be discussed, with lessons learned identified and ways forward discussed for improving NZMATES operations in the coming year.

Stakeholder Engagement and Programme Governance

No.	Indicator	FOP 1	FOP 2	LOP target
01.4	Number of PSG meetings that are well-attended and produce clear outcomes.	0	0	9
01.5	Number of TC meetings that are well-attended and produce clear outcomes.	0	1	16

Stakeholder engagement was a key activity in NZMATES' first year, and strong relationships have been built with a broad variety of stakeholders.

On the Governance side, while there have been some setbacks and delays in embedding formal arrangements and agreements, relationships themselves are sound with PLN both in Jakarta and Ambon, as well as with EBTKE and Dinas ESDM Maluku.

The Partnership Arrangement that provides the overarching governance for the NZMATES programme was signed between NZ MFAT, ESBTKE and PLN in August 2018². NZMATES held its public launch event in November 2018, attended by New Zealand Ambassador to Indonesia Dr. Trevor Matheson and Governor of Maluku Ir. H. Said Assagaf. At the launch an MoU was signed with the Maluku Provincial Government and YMCI, for the implementation of the NZMATES programme.

² At the time of writing this report NZMATES has been informed that legislative changes require the Partnership Arrangement to be re-signed by EBTKE.



Figure 4: The NZMATES team and staff from the New Zealand Embassy in Jakarta at the NZMATES kick-off event, together with the New Zealand Ambassador and Governor of Maluku.

Working groups were set up at the provincial level with PLN and Dinas ESDM, and through these groups work plans for NZMATES' technical support were developed. The number of requests for support far exceeded initial expectations, a testament to the value partners see in the collaboration with NZMATES.

The first Technical Committee Meeting was held at the Provincial Level in March 2019, bringing together Dinas ESDM, PLN MMU and Bappeda to review the workplan. While it was not possible for the work plan itself to be signed off at the meeting, it was nonetheless reviewed and agreed in principle by all parties. It is anticipated that the work plan will be formally signed off early April 2019.

While the first Programme Steering Group (PSG) meeting was intended to be held in the first quarter of 2019, this has been postponed due to the need to re-sign the Partnership Agreement. In the meantime NZMATES has maintained close contact with national-level partners and they have been involved at every step of the work planning process.

The NZMATES team has also worked to strengthen relationships with other key local stakeholders, such as Bappeda, the Office of the Governor of Maluku, and educational institutions such as Pattimura University and Ambon State Polytechnic.

Provincial elections were held in June 2018, and a new Governor was elected in Maluku, though the existing Governor remains in place until his term ends in April 2019. Thus, the NZMATES team has continued its engagement with the existing Governor, while anticipating potential changes in personnel in provincial agencies in the second quarter of 2019.

Relationships with national stakeholders, and international entities present in Indonesia's renewable energy sector, have also been strengthened, and valuable collaborations have already eventuated.



Figure 5: NZMATES first Technical Committee meeting

NZMATES team members have attended key conferences and events in the RE sector, and have held face-to-face meetings with many international funding institutions, NGOs and development agencies. NZMATES has already collaborated with GIZ to provide training opportunities to educational institution staff, and is working with the Asian Development Bank (ADB) to support activities related to a results-based loan for PLN in Maluku.

Output 2: Programme Framework Mapped and In Use

No.	Indicator	FOP 1	FOP 2	LOP target
02.1	Institutional framework mapping updated annually and approved by PM.	No	Partial	Yes
02.2	Technical framework analysis updated annually and approved by PM.	No	Partial	Yes
02.3	Financing, funding and grants catalogue updated annually and approved by PM.	No	Partial	Yes

The NZMATES Programme Framework provides a foundational analysis of the institutional and technical context, informing the ongoing development and implementation of programme activities. A preliminary version of the Framework was developed during the Activity Design phase, and the focus during this first year has been on updating and expanding it.

The Institutional Framework includes an analysis and database of regulations relevant to the renewable energy sector, as well as information on socioeconomic and cross-cutting issues and how they intersect with and could affect programme activities. Data on regulations has been kept up to date and is being complemented with information on mapping planning processes. The Political Economic Analysis developed during the Design phase has been updated to inform the new Communications and Stakeholder Engagement Strategy and Plan. The analysis of socioeconomic and cross-cutting issues has been expanded, and will continue to be added to as information is gathered during the first site visits, and will also be complemented by information gathered in the Baseline Survey.

The Technical framework comprises renewables and electrification planning, electrification needs mapping, renewable energy resource assessment and a catalogue of technological options. The focus in this early stage has been on collecting complete and up-to-date information on electrification needs, as well as renewables and electrification planning from key programme partners PLN, EBTKE and Dinas ESDM, as well as from international and donor agencies working in Maluku. This has developed into a more complete picture of existing plans and has informed the development of the first pipeline workplan. In an important development, provincial partners have requested NZMATES support with developing the 5-year strategic plan for Maluku, ensuring that renewable energy and electrification

plans are adequately incorporated. The catalogue of applicable renewable energy technologies is still under development.

The development of a financing, funding and grants catalogue has begun, with initial lists of potential sources of funding identified. Engagement with some key donors and financing institutions, such as the ADB, has progressed well and strong relationships have been established. It is anticipated that this deliverable will continue to progress in the coming year, and especially as the first round of projects move through the pipeline and towards funding-ready status.

While none of the Framework Analyses are yet at a stage that can be said to be complete, they are progressing and are already providing the NZMATES team with valuable information to inform programme activities.

Output 3: Off-grid RE projects progress smoothly through the project pipeline

No.	Indicator	FOP 1	FOP 2	LOP target
03.1	Number of off-grid RE projects in the NZMATES pipeline that have made progress towards funding.	0	0	15
03.2	Number of off-grid project assessments, studies or surveys conducted to support project progress through the pipeline and approved by partners.	0	0	NA

The NZMATES off-grid project pipeline is off to a good start, and substantive technical assistance work is due to begin in early April. While this is a slight delay relative to expectations, due primarily to the delay in the establishment of the PSG, the number of off-grid project support requests received has greatly exceeded expectations, meaning the NZMATES pipeline is on track to exceed the initial life-of-programme target of 15 projects supported. This is in part due to a large number of requests for support with refurbishment of broken solar and hybrid mini-grids, and the willingness to expand support (on a case-by-case basis) to other districts in Maluku outside Seram. The number of requests for support with new off-grid projects currently stands at 4, which is more in line with expected targets.



Figure 6: Dusun Haya, potential location for a new solar mini-grid in the NZMATES pipeline.

The initial list of off-grid projects for NZMATES to support is 40, which includes 9 refurbishments of PLN solar and hybrid mini-grids, 2 potential new solar mini-grid locations, 2 potential new micro-hydro locations, 4 refurbishments of EBTKE solar mini-grids, and sustainability support for 2 new solar mini-grids built by ESDM. In addition support is foreseen in developing

sustainable operational models for 21 additional existing systems in Maluku (solar mini-grids, hybrid solar and diesel mini-grids and one micro-hydro site), where systems built by EBTKE have been handed over to District Governments.

Schedules and work plans have been drawn up, and data gathering tools developed, so the NZMATES team are ready to go and begin conducting site visits, community consultations and technical assessments of the pipeline locations.

Output 4: Grid-connected RE projects progress smoothly through the project pipeline

No.	Indicator	FOP 1	FOP 2	LOP target
04.1	Number of grid-connected RE projects in the NZMATES pipeline that have made progress towards funding.	0	0	8
04.2	Number of grid-connected project assessments, studies or surveys conducted to support project progress through the pipeline and approved by partners.	0	0	NA

Two potential grid-connected projects have been identified so far as suitable for entering into the NZMATES grid-connected pipeline. One is a refurbishment of a grid-connected PLN solar PV system in the Banda Islands, and the other is a new small hydro system that is at the pre-feasibility stage in Waemala on Seram Island.

NZMATES are still gathering data and conducting appraisal of these two sites, but it is likely that progress will be made on both of these locations in the coming year. For the solar refurbishment, NZMATES support will involve conducting an asset inventory and refurbishment design recommendations. Meanwhile, for the grid-connected small hydro, NZMATES would provide support at the feasibility study phase in collaboration with the French Development Agency (AFD).

Output 5: Training and mentoring provided according to RE skills gaps identified

No.	Indicator	FOP 1	FOP 2	LOP target
05.1	Number of people who receive training and/or mentoring through NZMATES	0	2 ³	60
05.2	Number of training activities conducted aligned with identified skill gaps.	0	0	10
05.3	Number of training arrangements established between Indonesian and NZ universities or other educational institutions	0	0	1

While NZMATES has not yet conducted any training activities, support has been provided to Maluku partners to access training activities elsewhere. Members of staff from Pattimura University and Ambon State Polytechnic were supported to attend a two week training-of-trainers course on off-grid solar PV, organised by GIZ. The two teaching staff successfully completed the course, and Antoni Simanjuntak of Pattimura University has already started offering a course on off-grid solar PV to his students.

³ NZMATES facilitated the participation and provided budget for two people to travel to training.

In addition, NZMATES supported the Secretary of Dinas ESDM to attend a Short Term Training course on Renewable Energy Project Management in New Zealand, with a scholarship from NZ MFAT. While no budgetary support was provided by NZMATES (the scholarship covered the full costs of participation), NZMATES staff assisted with the application process both for the scholarship and for the student visa. Peggy Suitela attended the training course in February 2019.



Figure 7: Lecturer at Pattimura University, Antoni Simanjuntak, teaching students to measure the voltage of a PV panel, after attending a training of trainers in off-grid solar PV with support from NZMATES.

NZMATES has been working with ESDM Dinas and PLN to identify existing capacity strengths, as well as skills gaps and other capacity barriers. In the coming year skills gap analysis reports will be produced for both partners, informing a plan of trainings to be delivered by NZMATES as well as support for staff from key partners to access other existing opportunities where appropriate.

NZMATES has also established strong relationships with Pattimura University and Politeknik Negeri Ambon,

and is working with them to identify their key needs and priorities to strengthen their roles as providers of training in renewable energy to build the capacity of Maluku's next generation of renewable energy technicians, researchers and experts.

Progress towards short-term outcomes

While it is still early days for the NZMATES programme, some progress can already be seen towards short-term outcomes, especially regarding the recognition of NZMATES as the place to go for support with RE projects in Maluku.

Short-term outcome 1: NZMATES recognised as the go-to office for RE support that operates effectively within partner plans and objectives

No.	Indicator	FOP 1	FOP 2	LOP target
ST1.1	Number of project assistance requests from private sector, government or community	0	42	20

In the short time since the NZMATES programme started, great progress has been made towards NZMATES becoming known as the go-to authority on renewable energy in Maluku, both among key programme partners and among other stakeholders.

Requests for support from programme partners have been quick to start flowing in, with requests for support in 42 locations already received in the first year of the programme. This has immediately

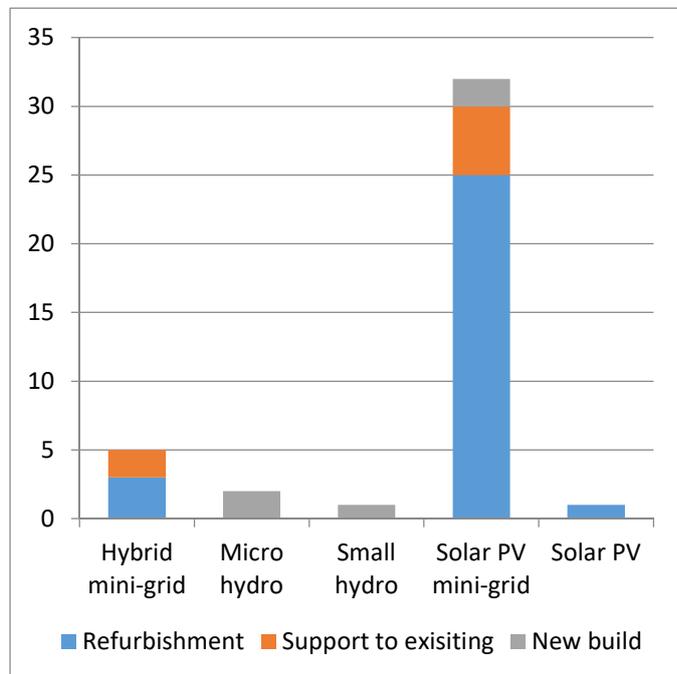


Figure 8: Summary of project support requests received by NZMATES in year 1.

greatly surpassed the initial life-of-programme target of 20 requests. This is mainly due to the large number of requests for support with refurbishment of existing renewable energy systems and the inclusion of locations in other Maluku districts, a high priority for programme partners which was not expected to play such a big role when the NZMATES programme was conceived.

Short-term outcome 2: Off-grid projects are funding-ready

While no projects are yet nearing the funding-ready stage, of the 40 projects entering the off-grid NZMATES pipeline, it can be expected that the 9 PLN refurbishments will reach funding-ready status within the next year. This would put NZMATES well on track to meet its target of 15 off-grid projects meeting funding-ready criteria by June 2023.

Short-term outcome 3: Grid-connected projects are funding-ready

With two grid-connected projects currently in the NZMATES pipeline, NZMATES considers it is on track to reach the life-of-programme target of 5 projects meeting funding-ready criteria. While grid-connected projects tend to be larger and more complex than off-grid ones, meaning the amount of time needed to get them to funding-ready status is significantly longer, NZMATES is still confident that this short-term outcome can be reached.

Short-term outcome 4: Skills and knowledge of key government, education and industry partners increases.

NZMATES has not yet conducted any training activities of its own, though two staff members from local educational institutions in Ambon were supported to attend a two-week training of trainers in off-grid solar PV organised by GIZ. These two people are expected not only to introduce off-grid solar PV into their teaching at their respective institutions, but will also be important partners for NZMATES in providing training to communities, solar mini-grid operators and technicians in future.

In addition, NZMATES has been working with partners Dinas ESDM and PLN to identify training priorities and needs, and in the next FOP period will work on developing an initial training plan that can be rolled out.



Figure 9: Manusa village, accessible only on foot, surveyed by the NZMATES team in October.