

BUILDING RESILIENCE IN TREATY VILLAGES

in the South Fly District, Western Province, Papua New Guinea



Annual Report 2018-2019

November 2019

Prepared by the Reef & Rainforest Research Centre



1 Introduction

The Building Resilience in Treaty Villages Program funded by the Australian Department of Foreign Affairs and Trade (DFAT) is working with all 13 Treaty Villages in the South Fly District of Western Province, Papua New Guinea (PNG). The region was selected as the project site because of its strategic importance to Australia under the Torres Strait Treaty and the close family ties between the PNG Treaty Villages and the Torres Strait and Cape York regions in North Queensland. The Program is delivered by the Reef and Rainforest Research Centre (RRRC) in partnership with INLOC International.

The 'change to resilience' framework developed by the Program is based on the successful Land and Sea Ranger programs in action across northern Australia over the last decade. The experience and lessons learnt from the Australian Ranger programs has informed both the theory and the practical implementation of the Building Resilience in Treaty Villages (BRTV) Program.

The Treaty Villages are impacted by seasonal flooding, extended drought periods, saltwater intrusion into the water table, extreme coastal erosion and sea level rise. Couple this with limited communication and no roads there are significant operational barriers to enabling improvements in healthcare, clean water, sanitation and hygiene. The El Nino weather pattern for the 2018/19 Austral summer triggered actions in disaster response plan preparation including a complete audit of community owned water infrastructure by the Rangers to update the Water Management Plans. The Water Management Plan controls access to water storage tanks to ensure equitable access to drinking water throughout the summer and enable key community facilities, such as the Mabaduan School and Aid Post, to remain open despite water limitations. The Rangers initiated integrated disaster planning strategies within their Ward Development Committees in preparation for the villages' capacity to respond to climatic events as an area of responsibility for the Ranger sector. Although improvements were made to maintaining water quality, personal hygiene and drinking water supply, crop failure remains a critical shortfall in village sustainability.

Training completed in previous years by the 110 Community Rangers (including 34 female Rangers) across the 13 Treaty Villages includes community health, marine safety, plumbing and sanitation, radio communications, first responder first aid, nutrition, disaster recovery, food security (crops and fisheries) and preservation techniques (air dryer and smokers). In 2018-2019, skills diversified into micro-business development with the Community Rangers completing training in timber milling, welding, smelting, advanced carpentry, charcoal production and molded concrete tank construction. This skill development is enabling the Community Rangers to service their communities with critical infrastructure and increased confidence and leadership. Advanced training was delivered to selected Rangers in small engine maintenance, safe boating and search and rescue. Ten Ranger Support Officers (RSO) (including 6 female RSOs) have assisted the Ranger activities and participated in training where practicable.

Leadership and business skills have been at the forefront of training during 2018-2019 including typing, computer literacy, basic business and numeracy. The BRTV Program has continued to develop two local small businesses for: (1) Urinary Diversion Dry Toilet (UDDT) kits, and (2) Magic Bags (reusable cloth sanitary packs). Importantly, female Rangers have been actively encouraged to take on greater leadership roles in the Ranger group as well as in their villages, and have been integral in the delivery of women's health education, reproductive health information and the Magic Bag micro-business.

Building on the notable progress to date, the Program has delivered:

- 1 A total of 110 Community Rangers across the 13 Treaty Villages who have attained competency in a diverse range of skills.
- 2 Ten Ranger Support Officers (RSOs) who are disabled villagers unable to undertake other jobs or tasks, are not only supporting the Ranger activities but designing infrastructure modifications to assist other disabled people to contribute more easily to their communities.

- 3 An additional 50,000 litres of water holding capacity brings the total to more than 1.3 million litres, through the installation of 3 new wells, modifications to 3 manual water-lift pumps designed for use by villagers on crutches, and 7 toilet kit facilities installed in communities and schools.
- 4 More than 50 community members and 16 Senior Rangers have commenced training in typing, numeracy, computer literacy and basic financial literacy.
- 5 Routine monthly Community Action Days led by Rangers in support of BRTV-initiated community activities in villages.
- 6 Rangers now recognised as a sector on the village Ward Development Committees and leading discussions and actions on disaster response preparation.
- 7 Identification of several new trade opportunities were identified and discussions with community leaders progressed in cocoa production; art retail; molded concrete tank manufacture; and egg production.

2 Governance

The BRTV Program faces the same governance and project delivery challenges that are well-recognised throughout PNG. Despite the resource wealth of Western Province, the Middle and South Fly Districts are considered to be the most poorly developed and under-serviced. PNG has a Human Development Index of 0.544, positioning it at 153 out of 189 countries and territories globally.

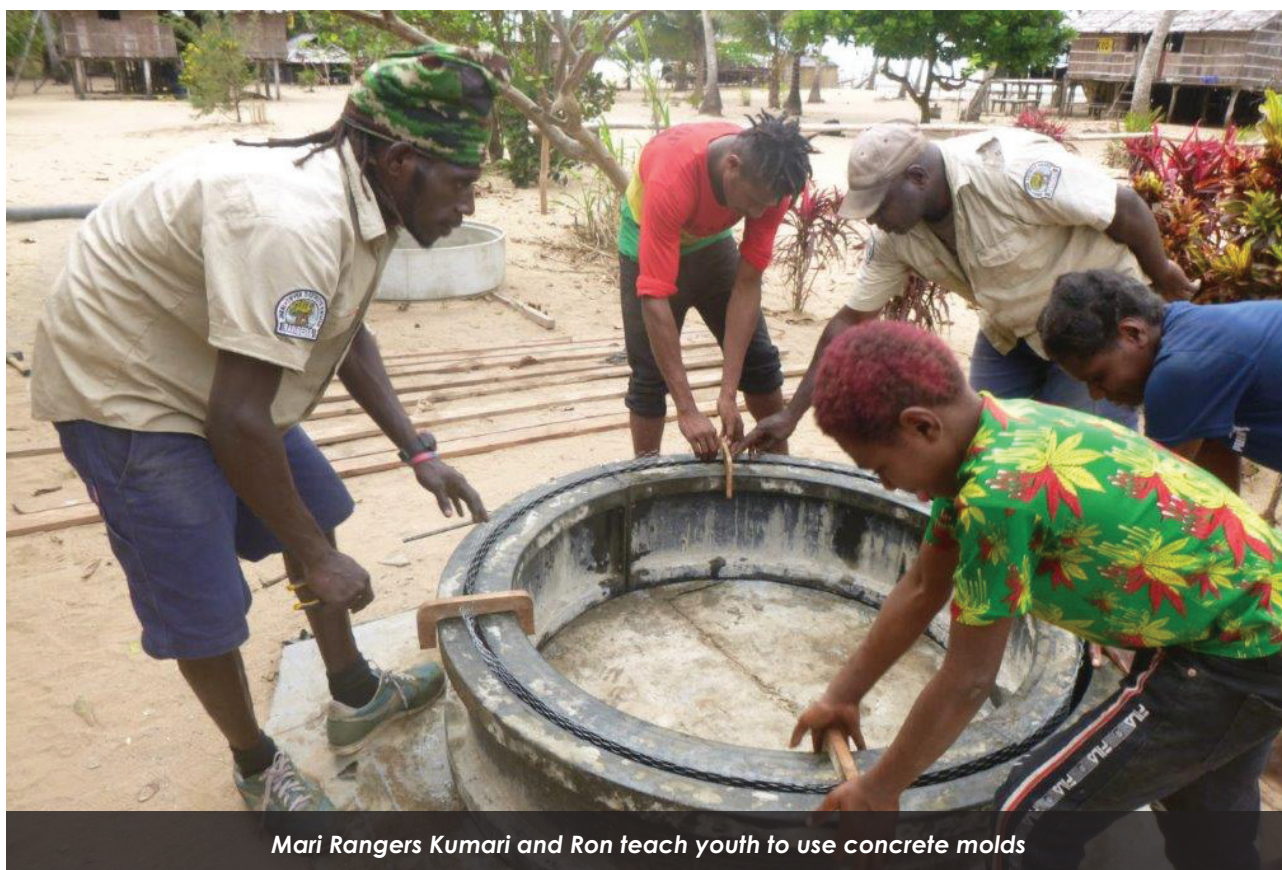
Governance affects virtually all aspects of a country's prosperity. Good governance is critical for improving aid effectiveness because it influences the extent to which governments develop and implement effective policy, citizens have access to basic services and hold leaders to account, and businesses flourish. Good governance underpins programs in all sectors, including education, health, food security and income, and determines the extent to which objectives are achieved.

There has been an evolution of governance in the Treaty Villages from external agenda setting to Elders and Rangers setting priorities, and engaging with communities to deliver agreed tasks and negotiate funds. Significant progress on local governance has been observed, with each community now formally recognising Rangers as a 'sector' in their Ward Development Plan, and a Senior Ranger has been given full membership on the Ward Development Committee. The success of the Program in delivering community leadership, infrastructure and services, as well as improving local governance has been noted at all levels, from local Councillors, Ward and Provincial Administrators to the national government and Joint Advisory Committee, the PNG and Australian Government representatives have spoken very highly of the work the Community Rangers are doing and the significant difference they are making in their communities.

This evolution in governance is operationalising DFAT governance policy at a local level. The DFAT Effective Governance Strategy (2015) identifies a series of guiding principles for enhancing governance and emphasises the fundamental importance of understanding and responding to the specific context of recipient communities. The BRTV Program is delivering on these areas in relation to effective governance:

- Requires capacity, legitimacy and authority to deliver public services, [regulate the economy, maintain order and the rule of law, collect and use revenue,] and act in the public good
- Representative, accountable and transparent governance
- Gender equality
- Promoting local leadership and working on issues that are important locally

The governance outcomes of the Program are consistent with DFAT's approach of supporting decentralised governance in PNG and downscaling organisational capacity and leadership from national to Provincial levels, to give PNG responsibility for delivery of services. The BRTV Program



Mari Rangers Kumari and Ron teach youth to use concrete molds

downscales to a village level to give village communities responsibility for their service delivery, subsequent development and future resilience.

The BRTV Program is improving governance through the delivery of a range of skills including business skills such as computer literacy, adult literacy and financial literacy training. The aim is for these skills to be transferable to village leaders in particular (as well as the general community) to assist the Ward Development Committees to draft and finalise Ward Development Plans and improve community development. Rangers are now recognised as a sector on the Ward Development Committees. The skills will also assist in the increase of entrepreneurship in the villages.

Early in 2018-2019, a Leadership Group was chosen consisting of all Senior Rangers, three female Ranger Support Officers and selected male and female group second-in-charge Rangers. The Leadership Group of 26 are now the main recipients of leadership training and consultation, using this knowledge to mentor other Rangers and improve their confidence to discuss issues with community leaders and members. The aim is to develop sufficient capacity in the region, ensuring real external support is not required into the future.

3 Project Implementation

The continuation of Community Action Days has worked well with Rangers leading their communities on regular Community Action Days in support of BRTV-initiated community activities. The Rangers provide the expertise, equipment and key materials, and the community provides their labour and local bush materials (e.g. sand and aggregate for making concrete). This approach has relieved the expense of using Rangers for unskilled labour tasks in support of BRTV activities and has engaged the community in investing themselves directly into community outcomes – which is aimed at gradually changing the culture towards one of more communal involvement in development of shared resources and infrastructure.



Tureture female Rangers Damudo, Buwai and Roselyn construct a family toilet



Ranger family toilet

The Community Action Day approach will evolve over the next year to now bring this community energy and commitment into the Ward Development Committee sector system, encouraging other sectors to mobilise their constituency to contribute to cross-sectoral cooperative outcomes.

Procedures are being implemented to ensure the BRTV Program outcomes will align within existing local frameworks and management, i.e. no BRTV projects will be conducted in the next year unless they are proposed to the WDC by the Ranger Sector representative, and subsequently agreed to, by the WDC.

The approach now is to focus on governance, leadership and the development of micro-businesses for self-sufficiency (and long-term program sustainability). The core skills needed to move into this sphere are being provided to the Community Rangers and increasingly to other selected community members.

3.1 Physical environment – water and sanitation infrastructure

Since the start of the Program, the Community Rangers trained under the BRTV Program have delivered greater than 1.3 million litres of water holding capacity in all 13 Treaty Villages (some new water storage infrastructure and many repairs to broken storage systems). The Program so far has delivered ten new wells, each with a life span of 80-100 years (subject to sea level rise and damage from natural disasters), five manual water-lift pumps, and enhanced infrastructure in three natural springs. During the annual reporting period, 50,000 litres of water storage was secured through repairs to existing water tanks which had been rendered inoperable or through installation of new constructed tanks in Sigabaduru, Mabaduan and Tureture. Two wells were also repaired to become operational in Old Mawotto. Water catchment sheds (vital components in the village water catchment and storage plans) funded decades ago by AusAid in many of the Treaty Villages are starting to collapse or have collapsed. Plans are now in place to repair the water catchment sheds using available materials in the area. In addition, the Rangers designed, manufactured and trialled theft-proof community water tank taps.

All 110 Community Rangers have received training in the construction of concrete tanks, using modular concrete rings made with the ring molds developed for lining of hand-dug water wells. This technique reduces the need for the purchase and transport of large poly tanks of similar capacity, and therefore reduces cost. It also makes villages less reliant on external products that must be shipped in. Using the techniques taught, two Community Rangers travelled to Nuku District, Sanduan Province to provide

requested training in cement molded water tank construction. This is a direct result of the training provided by the BRTV Program and demonstrates how the skills can be transferred to other provinces and communities in PNG. Cement molded water tank construction is being considered as a possible micro-business for Treaty Villages in the future.

The development of the first micro-business started in 2017-2018 with the Rangers producing Urinary Diversion Dry Toilet (UDDT) kits for installation in villages as part of the Water, Sanitation and Hygiene (WaSH) initiative. The design is suited to the extreme rainfall and flood conditions often experienced in Treaty Villages, with minimal sewage flooding into streets or houses during extreme wet periods or high tides. Two types of UDDT, referred to as 'Ranger Toilets' have been produced: Type 1 (Ranger Community Toilet) is a stronger, private,

Community Rangers Showcase Skills in Water Security

The Building Resilience in Treaty Villages Program began with and continues to deliver on water, health and sanitation (WaSH) at the local level. All 110 Community Rangers have developed awareness and skills in community health, water security and maintenance. This has included techniques and tools for constructing low cost ferro-cement WaSH infrastructure. In late March 2019, a team of two Rangers and a BRTV instructor were invited to Nuku District in West Sepik to teach local trainees how to make the water tanks using the Ranger methods. The training included the process and techniques for construction and installation of moulded concrete tanks and the plumbing of the tanks to a roof catchment.

The experience showcased not only the skills and knowledge of the Community Rangers in the construction of a functioning water tank, but their leadership in training and mentoring others. The training was very successful, and has demonstrated a capacity to further develop water tank construction training as a community micro-business.



Nuku trainees assemble tank rings

Timber milling – A Community Owned Micro-business

Community Rangers from Sui, Parama, Mabaduan, Sigabaduru, Tureture, Tais, Mari, Jarais and Bula completed their warranty mandated timber milling training in 2018/19. Having the skills for milling will firstly, progress the Ranger Family Toilet business in meeting their order for 100 toilets. The training has not only taught the Rangers the proper operational procedures to follow in milling, but also mill maintenance, timber selection and timber storage.

Coupled with carpentry skills training, the Community Rangers have been constructing school furniture and are planning and designing community infrastructure as agreed by the Ward Development Committee for Women's Resource Centres and village foot bridges. The sustainability of timber supplies will be a focus in the following year.



Rangers Matthew (left), Kuki (centre) and Eabi (right) adjust the sawmill



Rangers Serve (left), Eabi (centre), and Tuwi (right) with community trainees Maile and Gary undertake BRTV milling training

more expensive version for use in public facilities such as schools, communal areas and aid posts; and Type 2 (Ranger Family Toilet) is a lower cost version using enhanced bush materials for use in private dwellings. However, the less expensive Type 2 (Ranger Family Toilet) has been identified as the more sustainable and preferred option amongst the villages, so all design and development effort has been focused on this less expensive, private use model. The Rangers have an order for 100 kits and will continue the production and installation of these in the coming year. During 2018/2019, new construction materials were trialled for design improvements including the replacement of concrete toilet pans with recycled aluminium and metal solids receptacles, recycling molten waste aluminum cans into door latches and hinges and various wall and roof materials that can be sourced locally. Charcoal is a sustainable option for layering on the waste so training in charcoal production was provided. The Rangers have been receiving timber milling training as well and are using these skills to continue to produce the toilet kits. The timber milling and carpentry training have allowed the Rangers to build desks and chairs for the village schools as well.

3.2 Community Health

The BRTV Program recognises that good community health is a pre-requisite to participation in economic, political, and social development. It is therefore important that community health be integrated into project activities. This is of particular importance with regards to women's and children's health and the very high rates of communicable disease, including multi-drug resistant TB, HIV/Aids, leprosy, cholera, filarial elephantiasis, gastro-based diseases and malnutrition. Some of the communicable diseases are selectively impacting women and children.

The Program has continued to deliver in situ education, awareness and training in villages to respond to community healthcare issues, and referral pathways for villages to access the formal healthcare system (e.g. PNG Health TB program, Spacem Pikini program). Callan Services have been engaged to assist villagers with disabilities improve their personal wellbeing. Marie Stopes PNG opened a branch in Daru in early 2018, and the BRTV Program (primarily through the female Rangers) continues to provide community-level female health awareness on behalf of Marie Stopes. The BRTV Program also provided support to the United Church Women's Forum held at Mabaduan through access to linen and Magic Bags for 100 visiting female delegates. Seven Community Rangers took part in various roles on planning and coordination committees to gain valuable experience.



Katatai Ranger Saibai delivers a female health awareness presentation

All 110 Community Rangers have completed and are competent in First Respondent First Aid training (standard HLTAID003) with the addition of relevant elements of HLTAID005 Remote Area First Aid. During 2018-2019, the Rangers received advanced and revision training in 'first responder' first aid for snakebite, child birth, antenatal and post-partum care. Birthing kits donated by Birthing Kits Foundation Australia (BKFA) have been given to the female Rangers to distribute amongst their villages to expecting mothers and midwives. The female Rangers and birthing kits are supporting the PNG Health workers, village women who assist with birthing and the expectant mothers. The awareness raising of the possible health risks of birthing in the bush or at the beach has reduced the number of post-partum infections. The Rangers have now tasked themselves with building a "womens and children's centre" in most villages after community consultations took place and they have secured agreement from their respective Ward Development Committee.





Berr Senior Ranger Kasowa plants black-eyed peas



Ranger Kasowa's black-eyed peas

3.3 Enhanced food security through improved agriculture and fisheries practices

Food security is a major issue facing communities in the Treaty Villages, with limited access to protein as well as poor soil and climate conditions for growing crops. This component of the Project has focused on two key areas: improved agronomy using drought-resistant cultivars and improved access to and use of fisheries resources. All Rangers have been trained in basic agronomy skills and there are 26 agronomy mentor Rangers. Adjustments made to practices, in terms of the timing of planting and harvest and crop types, to address pest and rainfall issues have been trialled. A second trial using an improved strain of black-eyed pea cultivars commenced in June 2018 and involved planting over a three-month period (June-August 2018) to compare production outcomes with other crops during the dry months (June-November 2018). The trial was looking very successful until the peak of the drought whereby many of the crops failed due to a lack of water. Future trade opportunities continue to be investigated including an offer from a consortium of local land owners and interested parties for the BRTV Program to facilitate development of local cocoa production. A poultry and egg-laying enterprise is also being investigated.

All Rangers have been trained in basic fisheries resource issues and there are 26 fisheries mentor Rangers. A joint project between the Rangers and South Fly District Fisheries Officers continued the fisheries awareness presentations in Treaty Village communities. The presentations focus on basic ecosystem-based fisheries management, fishing methods, target species, fish handling and preservation techniques. The future focus of the fisheries sustainability project will be the role that BRTV Rangers can play in supporting current and future initiatives in turtle and dugong management from a food sustainability and livelihoods perspective in joint PNG and Australian waters of the Torres Strait.



Tureture Senior Ranger Vali teaches youth to make school furniture

3.4 Women empowerment and equitable participation

While there remain significant barriers to active and equal participation by women and minority groups in decision-making in the Treaty Villages, the BRTV Program has trained 34 female Community Rangers in the two Phases and they now take on leadership roles in their communities. Low levels of literacy, obligations to the family and cultural issues were placed as initial barriers to female inclusion however, the communities have now embraced the active role of female Community Rangers.

Female Community Rangers undertake the same training as the men including boat handling, first aid, construction, communications, small motor maintenance and plumbing. They also undertake additional training in women's health, nutrition and birthing assistance. Their inclusion in the Program to date has brought considerable benefit to the communities. The female Rangers also play a significant support role for the health workers in each of the communities and provide ongoing community-level female health awareness education.

After the completion of basic leadership skills training, Ranger groups now undertake all activities with a rotational leader each day. This includes leadership by the female Rangers, sometimes supported by a mentor, and there has been an obvious increase in confidence and equity in the Ranger group. The success of the female Rangers and the appreciation by community members has resulted in the female Rangers having greater participation in village meetings and decision-making.

The BRTV Program continued to deliver improved gender equity outcomes in 2018-2019. There is now one male and one female Senior Ranger in each village. Three female Senior Rangers are now on Ward Development Committees – a leadership result that is not matched in any other (theoretically) gender-open leadership positions in PNG (e.g. Ward members, chairmen, magistrates).

The production of reusable sanitary pad kits (Magic Bags) continued during 2018-2019, led by the female Rangers. The female Rangers received training in advanced sewing techniques and basic business



Tureture Ranger Damudo (centre) supervises log collection



skills from My Pathways, Doomadgee. Microbusiness training was further delivered in preparation for sales of the Magic Bags. After a positive response in initial sales of the reusable Magic Bags, a female Ranger was recruited as a Business Manager for the business. By June 2019, more than 250 Magic Bags had been sold. The Rangers are now preparing to sell 100 bags per month in the Treaty Villages and surrounding communities. Training in basic business literacy and numeracy is continuing. The immense social and health benefits, particularly for women and young girls, from this initiative must also be noted, as they go far beyond the benefits of simply establishing a small local business.

Community Rangers are speaking out about gender and disability equality and family violence, which is an important factor in influencing broader community attitudes towards these issues. The Program is providing strong female role models and positions for disabled community members, promoting information to counter cultural norms about gender roles and community domains.

The female Community Rangers have developed an anti-family violence narrative based on the reality that if a woman is beaten then she is unable to look after the children or undertake village work. Therefore beating your wife is an act against the whole village and pulls the village down. The male Community Rangers have adopted this narrative and represent a serious gender-enabling group. The male Community Rangers are held to the highest standards as community mentors. If a Community Ranger commits family violence or other unsavoury conduct, he loses his job, which will bring shame to his Clan and reduce his family's income. Male Rangers are also called upon to ensure that the female Community Rangers are safe at all times when visiting other villages or Daru.

An emphasis on domestic violence prevention and child protection protocols throughout the year has resulted in all of the Treaty Villages identifying either a female Ranger or female community member as a point of contact for safety.

Rangers supporting South Fly Disabled Peoples Organisation

BRTV Program has engaged with the newly formed South Fly Disabled Peoples Organisation (DPO). The DPO has only been able to effectively engage with disabled people on Daru, until BRTV joined a cooperative effort with the DPO to conduct a census of all citizens of the Treaty Villages who have a disability. Rangers from each village, coordinated by Ranger Support Officer Mukaro from Kadawa (who has a severe physical disability herself), are conducting the census and Rangers trained to type are typing the results for submission to the DPO. The data collected will help the DPO and Callan Services to better target their efforts to assist Treaty Villages with disabilities.



Bula Rangers conducting DPO census



Parama Ranger Lucy conducting DPO census

3.5 Disaster Risk Reduction

The Torres Strait and South Fly District are recognised internationally as a hot spot for climate change and increased natural disasters. There has been significant sea level rise (highest astronomical tide increase estimated at 52 cm since the 1920s), and more frequent extreme climatic events – drought and flooding. These natural disasters are predicted to increase in intensity over the next 50 years. Natural disaster impacts combined with poor sanitation and communicable disease outbreaks (e.g. cholera, multi-drug resistant TB) are a significant driver of cross border instability.

Disaster risk reduction plans and response training are a significant component of the BRTV Program. The four safety vessels and equipment such as shovels and chainsaws make up part of the village disaster response facility. The delivery of 9 new safety vessels for the Phase 2 villages is currently postponed until the funding becomes available. Early warning and prior preparation are the key to building community resilience. The Rangers have led their respective Ward Development Committees in disaster response preparedness plans and sector responsibilities during 2018/2019 in case of extreme drought, king tides and flood events. A mentor Ranger has been identified for each Treaty Village and they will become the Subject Matter Expert (SME) for that village on Disaster Response.

Marine Search and Rescue Training

Four Treaty Villages have had their Ranger vessel delivered and the remaining nine vessels will be delivered once the committed funds are made available. However, all 110 Rangers have completed training and advanced training in search and rescue. The Rangers can now confidently plan and respond to search and rescue activities in a variety of circumstances including along the coastline, in the open ocean and adjacent to reefs taking into account weather, wind, tides, wave height and visibility amongst a number of factors. Coupled with their completed First Responder First Aid and boat handling skills, the Rangers have undergone a number of simulation and practical responses in the event of a marine incident.



Rangers Sisa from Sui (left), Rosely (centre) from Tureture and Isaac (right) from Parama practice life jacket awareness as part of marine rescue training

4 Monitoring and Evaluation

The Program has established a robust Monitoring and Evaluation (M&E) approach that provides both quantitative and qualitative metrics. Practical progress by the BRTV Program and Community Rangers is mapped against annual work plans. This evaluation approach allows for a comparative analysis of the effectiveness of different leadership approaches in tangible outcomes for the community. The delivery of targets has been benchmarked against agreed budgets and timeframes.

As part of the administrative training for the Community Rangers and as a measure of progress, the Rangers are required to report on their activities. This reporting is comprehensive, and includes:

- Detailed reports on each first aid/medical emergency they attend.
- Detailed reports and photographs of the crowd of people attending each community training and awareness raising sessions that they conduct. This also provides a 'head count' of community members receiving training from the Rangers.
- Detailed reports of infrastructure work (e.g. installing tanks, digging wells) achieved independently of project mentors with supporting photographs for verification.
- Written report on issues and impediments and suggested improvements in the future.

These reports are collated and included in the general project reporting. The responsibility of reporting and evaluating performance is embedded as part of the overall leadership training. Accuracy and integrity in reporting is an essential element for each of the villages. The Community Rangers also verbally report to the Council of Elders in each village on their achievements against the work plan. Where the village leadership is weak, achievements against the work plan is poor, and this outcome is transparent.

The Reef and Rainforest Research Centre (RRRC) utilises the Australian Government M&E system and holds appropriate data in a number of formats. RRRC also holds relevant data from other Australian Government programs relevant to the South Fly District. In terms of information sharing, review and learning activities, the Community Rangers regularly meet with mentors/trainers and analyse progress and challenges.

The RRRC contracted CSIRO to conduct an independent M&E review based on the Theory of Change paradigm in 2018-2019. The review focused on Ranger-led activities and governance to complement the BRTV framework. Interviews with Rangers, community members and PNG government staff were conducted in January 2019. There was consensus that Rangers had gained new carpentry, plumbing and other trade skills, and that these skills have been applied and delivered community benefits. Amongst women, first aid and birthing support were two skills particularly valued. Community members indicated Rangers had provided life-saving aid to injured people. Female Rangers trained in first aid to support birthing until medical professionals could be accessed, had already provided invaluable help to women in labour. With regard to governance outcomes, positive results suggested progress in all planned outcomes, with the highest scoring indicators being 'political support' and 'community demand for better governance'.

5 Communications

The Program has a structured communication protocol with Treaty Villages and the District Administration and associated agencies. Regular briefings are given to update the District Administrator, District Treasurer, Police, Customs, Border Development Authority and Daru Hospital.

The sharing of information has helped the Project Program considerable scepticism about the project objectives. Many community members believed that the intent of the project was to prevent the harvesting of dugong and fisheries resources by Treaty Villages, or some other policing exercise. These misconceptions have been addressed and the work of the Community Rangers now receives community support and regular coverage in the local and national newspapers. The District Administrator saves these articles about the activities of the Community Rangers on his wall, which are regularly updated by his staff.

Collaboration with other institutions and potential partners is principally through the annual Traditional Inhabitants meeting of the Joint Advisory Committee of the PNG and Australian Torres Strait Treaty. Updates are presented to the attending PNG and Australian government agencies. Given the rapid progress of the Resilience Program, the information supplied has been well received and opportunities to integrate with other Australian Aid funded projects are being identified.

6 Innovation

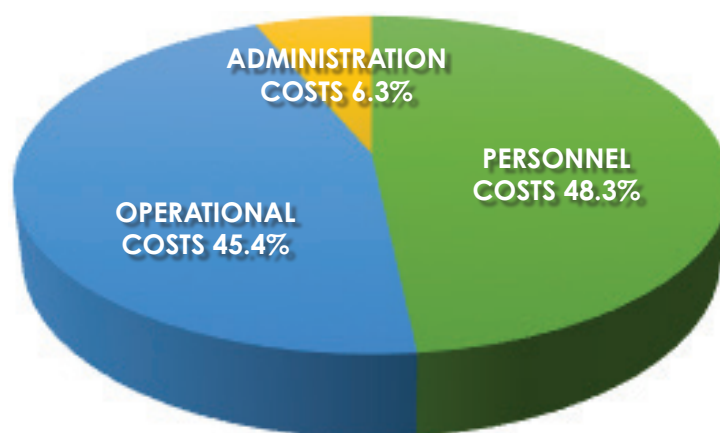
The entire BRTV Program approach reflects classic 'participatory action research', with an emphasis on community-driven action. The approach utilises community-based collective knowledge and learnings grounded in experience and social history. The trialling of innovative water capture, storage products and the UDDT systems is well advanced in many Treaty Villages with the trialling and selection of the Type 2 Ranger Family Toilets. These innovations will revolutionise water systems and sanitation in remote rural communities that are difficult to access.

It is clear that innovative opportunities also exist for micro-business development, disaster preparedness, more functional water capture and storage, sanitation, alternative energy supply, food production and storage, fisheries practices and sustainability.

7 Value for Money

The BRTV Program has carried out planned activities and produced planned deliverables according to the workplan and budget. Finance reports are prepared and reviewed quarterly to ensure the Program is on budget and funds are being spent only on activities and consumables within the scope of the Program. To date, an analysis of actual expenditure highlights the substantial investment in the Ranger training and platforms for implementation:

- Personnel costs (110 Community Rangers + 10 Ranger Support Officers + 8 Australian mentors/trainers + 2 PNG mentor/trainers + PNG support staff + technical support): 48.3% of the total budget (this includes community development officer wages, uniforms, trainer and specialist costs, all meetings).
- Operational costs (fuel, materials, travel, supplies, safety equipment, vessels, freight): 45.4% of the overall budget (this includes project equipment and materials - sanitation and WaSH infrastructure, food garden sustainability, disaster preparedness, access to markets, microbusiness, community governance and training, maintenance/freight, fuel, travel, accommodation, insurance, community communications and materials, monitoring and evaluation).
- Administration costs: 6.3% of the overall budget (includes administration, financial reporting and auditing, in-country coordination – excludes the RRRC contribution).



Given the high costs of staffing in-country, it is not unreasonable that personnel costs constitute the largest single component of expenditure. There are now 110 Community Rangers, 10 Ranger Support Officers, 10 trainers/mentors/experts (8 expat, 2 female nationals), 3 cooks/kitchen staff, and 4 guards. This is likely to grow slightly in the next year as additional village-based mentors and youth project participants become involved, with the aim of increasing knowledge and skills spread within the communities.

The high expenditure on materials for repair, maintenance and new infrastructure, raises the question of PNG government investment. The continued delay in the release of the funding promised by KLLG continues to mean that Rangers must be moved in hire boats. This is increasing the amount expended on fuel, hire, and freight. The increased movement of Rangers and stores to and from the villages in the last quarter of 2018/19 has resulted in an increase to Operational Costs. Note also that all costs relating to the Nuku Deployment have also been borne within the original Program budget.

8 Impact and Sustainability

In summary, the most significant improvements in community well-being and resilience to date include:

- Acceptance of Rangers as a Sector in Ward Development, including the Senior Ranger becoming a member of each Ward Development Committee, has directly embedded an agent of change within the fundamental development body in every village.
- Significantly increased water capture and storage capacity (1.3 million litres total), and long-term increased access to clean water supplies (water wells).
- Selection of the Type 2 UDDT (Ranger Family Toilet) as the preferred design for future sanitation infrastructure. Techniques and various readily available materials have been considered and trialled for alternative building components.
- Building a critical mass of 110 trained Community Rangers (34 female Rangers) with capacity to deliver services into all 13 Treaty Villages. These are the leaders of the future and present a pathway to strengthen the social and economic fabric of the South Fly District.
- The addition of 10 Ranger Support Officers (6 female) from the Treaty Villages who are disabled and would otherwise have limited job prospects.
- Embedding the Rangers into community governance that reflects their recognition as future leaders and ability to deliver on community priorities.
- A culture of safety and maintenance has been introduced into Treaty Villages.
- Transitioning to a more self-determined leadership and governance system led by Community Rangers to deliver community services.
- Reduced family violence and improved gender equity that are openly supported by both male and female Community Rangers, resulting in a greater empowerment for women and opportunities to participate in decision-making and service delivery at the village level.
- Improvements in community health understanding and reduction in water-borne diseases.
- Enhanced knowledge of and access to female health issues and services for all Treaty Villages.
- Increased disaster and emergency response capacity in Treaty Villages and assistance to marine disasters.
- Establishment of a safe and reliable platform of service delivery enabling future 'fee for service' businesses to be developed (e.g. for Treaty Awareness visits, biosecurity, research and health services).
- Livelihood training for Community Rangers who are competent in preparation and costing of service tenders. There is also an audit of village skills and equipment to identify opportunities for the villages to compete against external tenderers for the delivery of service contracts that have been let by the District Administration or donor agencies.
- Improved 'work readiness' of Community Rangers through the skills training and qualifications acquired, to enable access to employment opportunities in PNG or internationally.
- New knowledge and skills in leadership, gender equity, business and literacy to assist communities and Ward Development Committees in Ward Plans.
- Development and trial of two new microbusinesses for toilet kits and reusable sanitary pads (Magic Bags) that can deliver essential needs to communities as well as small-scale income.

Further Reading

PNG Treaty Village Resilience Program, South Fly District, Western Province, PNG: <http://rrrc.org.au/png-treaty-villages/>

Commonwealth of Australia, DFAT, Effective Governance: Strategy for Australia's aid investments, March 2015.
Available at: <https://dfat.gov.au/about-us/publications/Documents/effective-governance-strategy-for-australias-aid-investments.pdf>

