MONITORING MANAGEMENT EFFECTIVENESS WITH PAPUA NEW GUINEA'S LOCALIZED METT

FOR BETTER MANAGEMENT OF PROTECTED AREAS

"
WE WANT TO PROTECT OUR LANDS, SEAS AND SACRED PLACES FOR OUR CHILDREN "

STAKEHOLDERS

The key organisers of this project were UNDP, CEPA and SPREP. The assessment was part of the GEF-4-funded project *Community-Based Forest and Coastal Conservation and Resource Management* in PNG. The key participants in the workshops conducted as part of the assessment included customary landowners and management committee members of protected areas, and CEPA staff. Some workshops were also attended by provincial government representatives.

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IN THIS CASE STUDY

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HISTORY OF PNG'S PROTECTED AREAS

PNG'S PROTECTED AREAS TIMELINE

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BACKGROUND | **OVERVIEW**

Sound natural resource management (NRM) preserves lives and livelihoods. The effective management of natural resources and livelihoods in protected areas is critical for achieving sustainable development outcomes by integrating biodiversity and cultural protection with sustainable land use practices.

Papua New Guinea (PNG) is outstanding for its natural and cultural richness, with up to 5% of the world's plant and animal species, the highest language diversity in the world, and vast areas of natural forest – the island of New Guinea has the third largest continuous area of tropical forest. This unique environment, rich in natural resources, is owned almost entirely by customary landowners, and over 80% of people live in rural villages and produce much of their own food[1].

Through the establishment of protected areas, well-supported communities can work to balance their land and water use and ensure that

their natural resources are protected from large-scale exploitation and over-exploitation. While some areas are protected from hunting and fishing, in most cases traditional use continues. This enables local communities to sustain lives and livelihoods and continue traditional cultural practices in the protected areas.

Although land and sea resources have been managed sustainably through cultural practices in the past, increasing pressures from a growing population, a changing climate, and extractive industries have made this traditional form of management more difficult. The extensive traditional knowledge of the customary landowners can be supported by improved access to data on natural resources. There is still much to discover about the wildlife and cultural heritage of PNG's protected areas.

To read only the key parts of this Case Study, Jump straight to:

- **Outcomes**
- **Lessons learnt**
- **Conclusion**

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1. Bourke (2020)

PAPUA NEW GUINEA CONTAINS

7%
of the world's biodiversity in less than

1%
of the world's land

KEY WORDS

Keywords: Management Effectiveness Tracking Tool, PNG-METT2, Protected Area Management Effectiveness Evaluation, Papua New Guinea, UNDP, GEF, threats, values, community engagement, governance, resilience, environment, gender equality, sustainability, customary landowner, biodiversity, natural resource management

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BACKGROUND | **OVERVIEW**

This case study outlines how UNDP, in collaboration with PNG's Conservation and Environment Protection Authority (CEPA) and the Secretariat of the Pacific Environment Program (SPREP), has developed the PNG-METT (Management Effectiveness Tracking Tool), a tailored, localised version of the global METT. This has enabled communities, government officials and other stakeholders to build shared knowledge about PNG's protected areas, assess their management effectiveness and build more resilient management practices.

This study, including key findings from an assessment of PNG's protected areas, is a prime example of how UNDP delivers integrated development approaches driven by country policies. It demonstrates also how UNDP's six signature solutions – poverty and inequality, governance, resilience, environment, energy, gender equality – are powered by the three enablers of strategic innovation, digitalisation and development financing, to foster sustainable change.

THE LUKIM GATHER APP
The Lukim Gather mobile data application, one part of the NRM Hub toolkit, assists protected area communities in contributing to METT assessments by providing an annual update on status of values and threats and georeferenced data to help manage and monitor natural resources. For more on the NRM Hub, go to **www.png-nrmhub.org**

> " The Wildlife Management Area (WMA) is surrounded by development. There is a Special Agricultural Business Lease on one side and an oil palm plantation on the other, and the community is working to protect and maintain their forested environment within the WMA... The biodiversity is important for subsistence purposes and for tradition and custom. "
> – CUSTOMARY LANDOWNER, TAVOLO WMA

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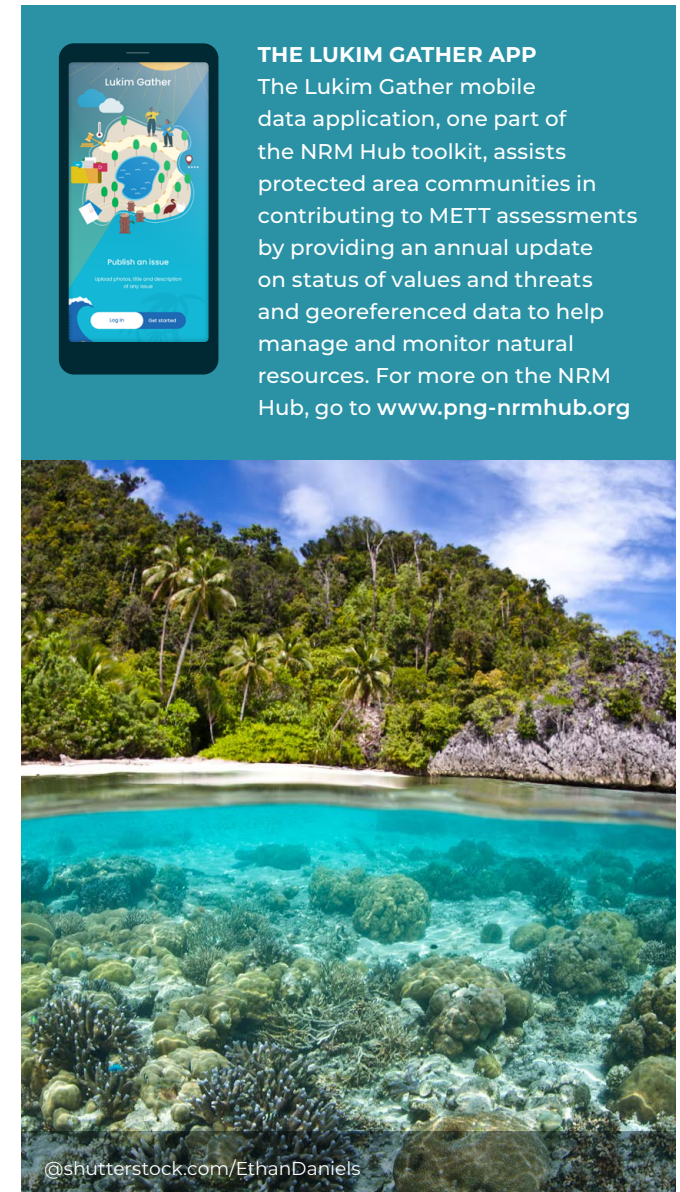
BACKGROUND | HISTORY OF PNG'S PROTECTED AREAS

By 2000, PNG had 45 protected areas with a total area of over 1.5 million ha. This increased to 61 formal protected areas totalling 2.2 million ha (4.8 percent of the country) by 2021. Several significant areas are awaiting gazettal. In addition, many locally managed protected areas, especially in the marine environment, are not yet recognised in the formal protected area registry. There remained a handful of examples of external funding and initiatives that had been used to develop and sustain new conservation areas.

Many protected areas have been created by customary landowners to safeguard their lands and seas from logging and mining, and to continue practicing their traditional cultures that revolved around hunting, fishing and gardening, protecting their *ples masalai* (sacred places) and passing on their knowledge and traditions, including their *tok ples* (local language).

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Papua New Guinea Protected Areas

Legend
- 🟩 Existing Protected Areas
- 🟫 Proposed
- ▨ Kokoda Interim Protection Zone
- ★ National Capital
- ◉ Provincial Capital
- Provincial Boundaries

Scale 1:600.000   Conservation & Environment Protection Authority, 14 July 2021

" The main reason to establish the WMA was to stop land grabbing. In the past, some people advised our leaders to put the land into a protected area to stop land grabbing and to protect the megapodes. We want to protect our customary values and traditions and to use the WMA to obtain customary materials for ceremonies and other uses. "
- CUSTOMARY LANDOWNER, GARU WMA

BACKGROUND | **HISTORY OF PNG'S PROTECTED AREAS**

While protected areas in PNG are established on paper, their management has remained patchy. A significant evaluation of management effectiveness in 2006 made some important recommendations to strengthen the protected area system and to halt the deterioration of values being experienced at that time. However, when the 2016-17 evaluation was initiated, there was no updated knowledge of most of the protected areas: most had not been visited or contacted by CEPA in the previous 10 years, and in many cases assistance from NGOs had also been withdrawn. There was no network of contacts, central funding or ranger workforce, so little was known about the current situation, except for a few outstanding examples where external funding and initiatives were being used to develop and sustain new conservation areas.

A series of projects supported by the GEF and implemented through CEPA and the UNDP had led to a stronger, more modern policy and legislative framework, including the PNG Policy on protected areas , which forms the basis for the Protected Areas Bill. The Policy commits to regular PAME assessments as a basis for improving the overall network of protected areas. Protected area projects implemented by CEPA and UNDP are summarised in the HISTORY OF UNDP INVOLVEMENT IN PNG PROTECTED AREAS diagram.

Landowners of Balek Wildlife Sanctuary are very proud of their sanctuary and want to protect it from outside exploitation.
@UNDP Papua New Guinea / Ann Peterson

> " My father came up with the idea of a sanctuary and he convinced the members of the community. Logging companies were interested in the area but we recognised the importance of the area for wildlife. We didn't want to have logging. We would have lost everything. We wanted to keep it protected for our children.
> - CUSTOMARY LANDOWNER, BALEK WILDLIFE SANCTUARY "

@UNDP Papua New Guinea / Theresa Dearden

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2. Chatterton et al. (2006).

PRE-UNDP INVOLVEMENT

2013-2019

2016-2020

2019-2023

PROTECTED AREA DEVELOPMENT BEFORE UNDP INVOLVEMENT

- Development of first protected areas including nearly 1 million ha of protected areas declared between 1975 and 1980
- Slow decline due to withdrawal of governmnet and then NGOs from most protected areas
- By 2010, no coordinated management or programs for protected areas in PNG; little knowledge, few resourced areas

COMMUNITY-BASED FOREST AND COASTAL CONSERVATION AND RESOURCE MANAGEMENT IN PNG

- Development of Protected Area Policy, Implementation plan and revised protected area types
- Drafting of modern legislation
- METT evaluation across 58 protected areas, greatly increased contact and knowledge base; renewed commitment
- The Protected Area Bill was initiated
- Land use and conservation planning for East and West New Britain, and livelihood assistance trials
- Updating of the national conservation priorities for terrestrial and marine areas
- Beginning of cooperative work with provincial governments
- Scope for financing mechanisms for protected areas

GEF 5 STRENGTHENING THE MANAGEMENT EFFECTIVENESS OF THE NATIONAL SYSTEM OF PROTECTED AREAS

- Capacity assessment and developmnt of action plan to improve CEPA's capacity in protected area management
- Development of policies and processes for managment, including working with provincial government and communities
- Support to pilot sites for enhanced management and livelihood support

GEF 6 SUSTAINABLE FINANCING OF PAPUA NEW GUINEA'S PROTECTED AREA NETWORK

- Enabling conditions for improving the sustainability of the protected area system
- Establishment, operationalization and mobilization of funding for a Biodiversity and Climate Fund
- Enhanced management capacity and financial sustainability of individual protected areas

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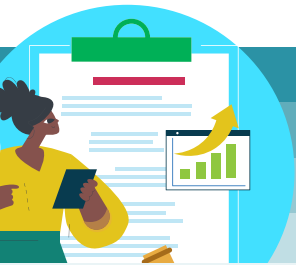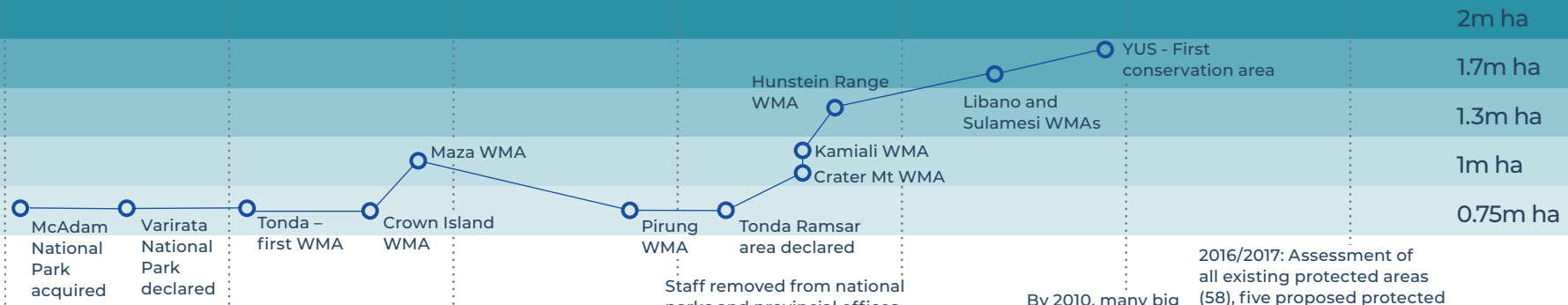
MAJOR GAZETTALS TIMELINE

2m ha

1.7m ha

1.3m ha

1m ha

0.75m ha

- McAdam National Park acquired
- Varirata National Park declared
- Tonda – first WMA
- Crown Island WMA
- Maza WMA
- Pirung WMA
- Tonda Ramsar area declared
- Crater Mt WMA
- Kamiali WMA
- Hunstein Range WMA
- Libano and Sulamesi WMAs
- YUS - First conservation area

Nearly 1 million ha of protected areas declared between 1975 and 1980

INDEPENDENCE

Government officers assisting with management of protected areas

Staff removed from national parks and provincial offices. End of active national government enforcement and education programs. NGOs active. LMMAs established.

By 2010, many big NGOs reducing their on-site protected area presence

Renewed efforts to develop PA system Creation of CEPA

2016/2017: Assessment of all existing protected areas (58), five proposed protected areas and five Locally Managed Marine Areas

2020/2021: Establishment of the METT Working Group

2022: METT-2 has been completed

HISTORY OF PROTECTED AREAS

1960 | 1970 | 1980 | 1990 | 2000 | 2010 | 2020

MAJOR ACTS TIMELINE

Tambu sites, *masalai areas*, customary laws and boundaries still continuing on customary lands across PNG

National Parks and Gardens Act 1966 Fauna (Protection and Control) Act 1966

Conservation Areas Act 1978 Environmental Planning Act 1978

Organic Law Act 1986

ICAD trials

Conservation Needs Assessment 1993

National Forest and Conservation Action Plan 1992 protected area review and register

Management effectiveness assessment 1999 BioRap 1999

RAPPAM 2006 World Heritage Nominations 2006

Terrestrial conservation assessment 2010

CEPA Act 2014

2014 – Repeal of the National Parks Act, however the National Parks Regulations remain which are part of the CEPA Act on Management of National Parks.

Combined Land/Sea conservation assessment 2017

Climate Change Act 2015 Protected Area Policy 2015 Marine conservation needs 2015

METHODOLOGY

OUTPUTS

FINDINGS

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Protected area management effectiveness evaluation (PAME) tells us how well the natural and cultural resources in protected areas are being managed and whether they are achieving their objectives.

Over time, evaluations provide evidence of progress in protected area management, clearer understanding of the underlying values, management approaches and the nature of threats, as well as detailed information for better management.

They also lead to discussions about better management of the protected areas.

Well-designed and implemented assessments can be key to an adaptive management approach[3]. The METTs undertaken in 2016-17 were used to develop management plans for all protected areas, and also led to significant policy changes.

Using the workshop process documented here, PNG's METT project has helped compile and consolidate substantial information, maps, research and documents about protected areas, including:

- The current state of protected areas

- The extent to which protected areas are achieving their planned outcomes

- The status of key protected area values (i.e. improving, stable or declining)

- Current and future threats

- Adequacy of resource management and priorities for improvement

- Appropriateness, effectiveness and efficiency of management processes

- Steps for improving management and ensuring values are better protected[4]

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3. Chatterton et al. (2006).
4. Hockings et al. (2015).

THE PNG METT | HOW THE ASSESSMENT WAS UNDERTAKEN

An evaluation of all the protected areas in the network was undertaken in 2016/2017. Further assessments were also undertaken in 2020/2021 and will be continued through the project "Sustainable Financing of Protected Areas 2018-2025. The evaluation projects have included refining and localising the methodology, training facilitators and recorders, conducting workshops to fill out the questionnaires, analysing the results and documenting the findings

DEVELOPING THE PNG METT-2

Across the world, the METT is the most widely used tool to assess how well protected areas are being managed, and is required by both GEF[5] and UNDP reporting processes. Materials documenting the international version of METT are readily available[6].

In 2016, when the PNG protected area assessment started, the international METT3[7] was in place. This tool was modified and localised to become the 'PNG-METT'[8], which was applied in the national assessment. The modifications focused on:

Ensuring that the questionnaire was appropriate to the PNG context, with language and technical terms modified to suit local levels of literacy and knowledge of English

Rewording questions to recognise the dominance of customary land ownership in the protected areas network, the lack of paid staff where communities manage their own lands and seas, and the fact that many people live in protected areas and harvest resources from them

Adding questions about protected area benefits and values, as well as the condition and trends in these values over time, to gather information about the outcomes of protected area management, and thus establish a basis for management planning[9]

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5. To add to possible confusion; GEF has its own version, the 'GEF-METT'. GEF reporting must use this version.
6. Stolton et al. (2021). Many resources on the METT can be found at https://www.protectedplanet.net/en/thematic-areas/protected-areas-management-effectiveness-pame?tab=METT
7. Stolton et al. (2007).
8. The development of the original version of the PNG-METT is described in Leverington et al. (2017)

THE PNG METT | **HOW THE ASSESSMENT WAS UNDERTAKEN**

In 2021, the international [METT](#)4 was released and the PNG-METT was updated to become the PNG-METT2[9]. The revised and expanded tool is consistent with the international standards of METT4 but also includes questions on governance and social assessment[10].

> " The WMA is important for animals – we use them for hunting. There is a sacred place for the Wallaby. Wallabies have a special meeting place and they have a leader (usually smaller than the other wallabies) and the wallabies gather and 'listen' to the small wallaby. "
> – GARU, WMA

WORKSHOPS AND INFORMATION-GATHERING
Globally, METT assessments are usually completed by rangers or government staff, with external support and community participation. Since most protected areas in PNG do not have rangers and there is little direct engagement with government, the key participants in the METT assessment were from the community and members of protected area management committees. The assessment was supported by CEPA and UNDP, who were responsible for facilitating, recording, and providing the considerable resources needed to implement the process.

Participants travelling along Lake Kutubu.
@UNDP Papua New Guinea / Ann Peterson

Participants from Lake Kutubu WMA assessment.
@UNDP Papua New Guinea / Ann Peterson

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9. Please see the PNG-METT2 Field Guide for the Facilitator and Data recording excel
10. Questions on governance were based on questions from the draft Site-level Assessment of Governance and Equity (SAGE)
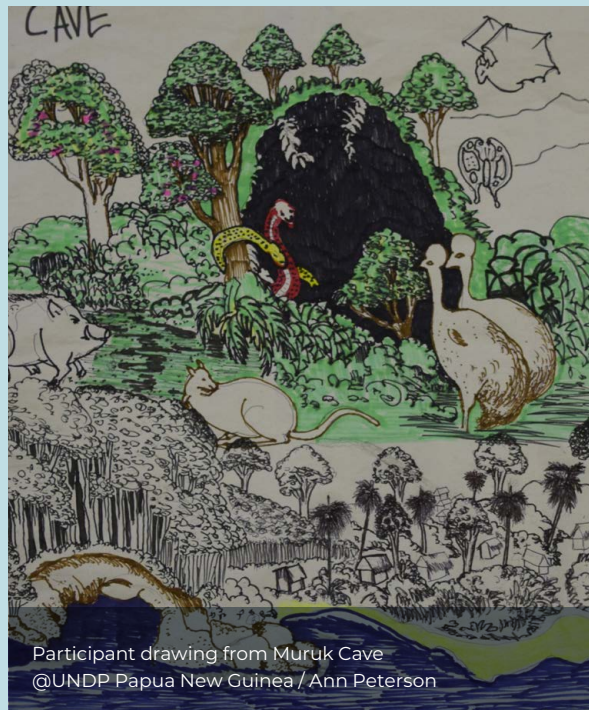
THE PNG METT | **PROTECTED AREA VALUES**

In one of the most insightful workshop sessions held during the METT assessments, titled *What do you like about your protected area?*, participants drew spontaneous images of things they liked and valued in their protected area, making sure that all aspects – natural, cultural and socio-economic – were considered. Further discussion helped narrow down their most important values, their current condition and trends.

Important values identified in this way included biodiversity (forests, coral reefs, fish, mammals, birds etc), clean water (for drinking and as habitat for fish), cultural and spiritual values, tourism, scientific and educational values. Protected areas' benefits include food, timber, medicinal plants and employment.

> **"** We have cultural sites [including a] large flat rock (Panuluan stone) on the northern side of the island. It is very unique. Pregnant women sit on the stones and this will produce a tall child **"**
> – TABAD WMA, MADANG LAGOON

Healing waters of Balek Wildlife Sanctuary, Madang
@UNDP Papua New Guinea / Ann Peterson

Participant drawing from Muruk Cave
@UNDP Papua New Guinea / Ann Peterson

> **"** In the sanctuary we have kwila trees, butterfly, herbal plants and national iconic species such as the bird of paradise and crocodile. There are python, scorpion and other unique species. There are no cassowaries (muruk) anymore as they have been hunted, so we must protect what is left. It is important to have this place so that children can come here and learn about the environment. There is healing water in the sulphur springs. People come here to be in the water as it helps with many illnesses (e.g. malaria, leprosy and other sicknesses). **"**
> – BALEK WILDLIFE SANCTUARY

THE PNG METT | **OUTPUTS**

The 2016/2017 rollout of the PNG-METT provided information on 59 protected areas. Some of these areas had been assessed ten years earlier[11], and information from those studies were used as a baseline where possible.

Transparent methodology and streamlined reporting for GEF

The methodology for the original PNG-METT was published by UNDP and SPREP, ensuring that the process was transparent and shareable[12]. The updated PNG-METT2 incorporates extensive support materials that can help others undertaking similar assessments, such as a Facilitator Guide, METT Excel recording spreadsheets, a glossary, participants questions, a checklist to prepare for the METT assessment, the invitation, the agenda, the information package and so on (See the PNG Biodiversity website | for more details and download links). The PNG-METT2 also populates the shorter and

slightly different GEF-METT[13], so the assessment can quickly give the scores needed for this reporting without repeating the assessment.

Actionable protected area factsheets

As the METT questionnaire is not easy to read, summaries[14] were developed for each protected area, and have been useful in raising awareness within protected area communities and helping with protected area management. This is important in PNG, where little or no information was previously available for many protected areas.

Report and presentations

To provide a national-level overview, a country report[15] was developed including reflections from stakeholders and country-wide recommendations that can be applied on a network scale as well as at the protected area level. The report guides decision-making and improves transparency and accountability. Detailed PowerPoint presentations also summarised the results from across the country. A report was developed with detailed analysis of the METT results, reflections from participants and country-wide recommendations.

11. Chatterton et al (2006) had used the RAPPAM methodology and obtained a great deal of valuable information, but details of the individual protected areas were not readily available due to poor information storage systems in the country. Though different questionnaires were used, the results were quite easy to compare between the 2006 and 2017 reports.
12. Leverington, Peterson, & Peterson (2017)
13. Through cross-linking scores in an Excel workbook
14. These factsheets will be available on www.pngbiodiversity.org
15. In contrast, most METT evaluations are only of individual protected areas. Recent examples of useful whole-country METT reports include Bhutan (Lham et al., 2019) and South Africa (Adams & Kawolski, 2021).

Key findings presented in the report include:

STRONG APPRECIATION OF VALUES

Most respondents had a strong appreciation of the benefits or values of their protected area. The highest scores went to attractive scenery, supporting traditions and customs, tourism, fresh water and biodiversity.

LIMITED MANAGEMENT PROGRESS

Overall management progress in PNG's protected areas was limited with some very low scores indicating little or no active management. Only four protected areas were judged as being soundly managed (Figure 1). Almost all participants requested greater government involvement. Most customary landowners wished to remain the primary stewards of the protected areas but acknowledged their need for financial, logistical and technical help. Their hope was that future management would involve true and sustained partnerships, with shared responsibility for management.

THREAT ANALYSIS RESULTS

- The threat analysis showed that landowners perceived the following as their most serious threats:
- Climate change and severe weather (93% of protected areas)
- Uncontrolled biological resource use (mostly hunting) (90%)
- Illegal settlers. Seen as uninterested in sustainable wildlife harvesting and causing depletion of species like squirrels, bandicoots and birds
- Invasive species (86%)
- Loss of culture and traditions (81%).

FIGURE 1:
Overall progress in management effectiveness for protected areas in PNG, 2017 (percentage of protected areas achieving each total management effectiveness rating)

7% Very good progress

5% Good progress, some concern

64% Little/no progress

24% Some progress, high concern

CONDITION OF VALUES CONSIDERED LARGELY INTACT

Despite poor resourcing and limited management, 73% of customary landowners estimated protected areas' values to be in good to very good condition (Figure 2). However, these protected areas represented only 45% of the network's total area. 53% of protected areas were experiencing decline in some important values.

FIGURE 2:

21% Very good

12% Poor

15% Fair

52% Good

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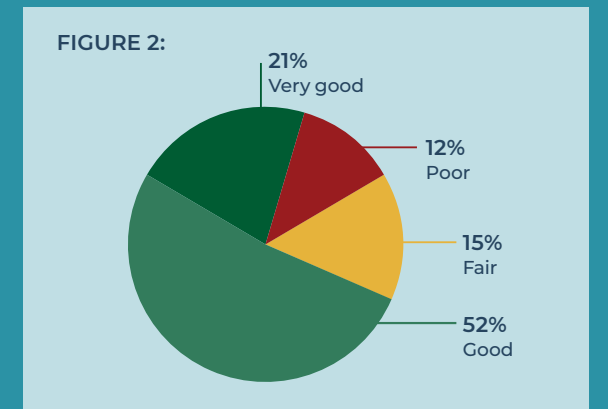
TRAINING MATERIALS AND PROGRAMME

In 2021, government staff were trained and mentored to organise, conduct and record METT assessments. Training was delivered face to face before COVID-19 and during the pandemic as a self-paced online course that incorporated creative assessment, online discussion and personal reflections for staff from CEPA and some provincial governments.

> " It is important to harmonize local cultural and traditional knowledge with science and take action to conserve the earth's biodiversity. This will enable the ecosystem to continue providing the services that support the survival of life on earth "
> – PARTICIPANT REFLECTION ON BIODIVERSITY

> " People differentiate themselves based on the environments they come from. The natural environment has influenced the life of local people for thousands of years. As a Papua New Guinean, my natural environment gives me my identity "
> – PARTICIPANT REFLECTION ON ECOSYSTEM SERVICES

In 2021, CEPA staff who had been trained in PNG-METT2 organised and facilitated workshops.
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THE PNG METT

OUTCOMES

LESSONS LEARNT

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IMPROVED RELATIONSHIPS BETWEEN STAKEHOLDERS

The opportunity for government staff to travel and meet with customary landowners and other stakeholders after years of little engagement improved relationships between CEPA and protected area communities.

RENEWED COMMUNITY COMMITMENT TO PROTECTED AREAS

Most communities attending the workshops sought better management and expansion of their protected areas. They were also interested in receiving assistance and funding for training, facilities, equipment and establishing conservation activities or tourism.

Many landowners face pressure to sell their lands or to approve development interests, which can result in rapid environmental deterioration. Some were concerned by the lessening support for their protected area from within their own communities.

LEARNING AND INFORMATION EXCHANGE

Starting from a low information baseline, all workshop participants learned about protected areas, both from existing knowledge and from each other. The project helped them to rediscover much past information that had been lost as well as to add new research and spatial information. CEPA staff better understood protected area values, potential opportunities and how communities managed their natural and cultural resources, often with limited funding and support.

" The WMA is our 'mama graun' (mother earth). It has forest, kumuls, tree kangaroos, cassowaries. ... We form an association with mama graun. Our survival depends on this and we need to protect this land, the forest and the animals. We also want to extend the WMA so there is no more destruction of the forest. "
– MOJIRAU WMA

Caretakers of Blamey's Garden, Namanatabu WMA
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VALUES-BASED MANAGEMENT PLANS DRIVEN BY METT DATA

CEPA began using information gathered through the METT evaluations to draw up values-based management plans for protected areas in 2019/2020, supported by UNDP through GEF-5[16]. Over 45 draft management plans or Statements of Management Intent have been produced so far using the Open Standards approach[17] to identify values, targets, threats, opportunities, key actions and strategies.

METT data has also been used to assess the capacity and competence of protected area management committees and rangers, and to develop specific plans for community engagement and capacity building.

INCREASED COMMITMENT FROM CEPA

Many CEPA staff were ambivalent about their role in supporting protected areas, apart from a few national parks, when the project began, and believed this was the responsibility of local communities and provincial governments. However, talking to communities helped them realize how much landowners would welcome a higher level of government engagement, and led them to greater commitment and communication with these areas.

Understanding the dire situation of the protected areas and landowners' passion to protect their natural heritage also inspired CEPA to work with UNDP to apply for GEF funding. This has led to the current project's focus on financial sustainability through a Biodiversity and Conservation Fund[18]. which supports the improvement of protected area management.

Landowners in discussion with CEPA
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Discussions between CEPA staff and landowners
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16. Unfortunately the work has been limited, due to covid as staff could not visit the communities
17. Conservation Measures Partnership (2020)
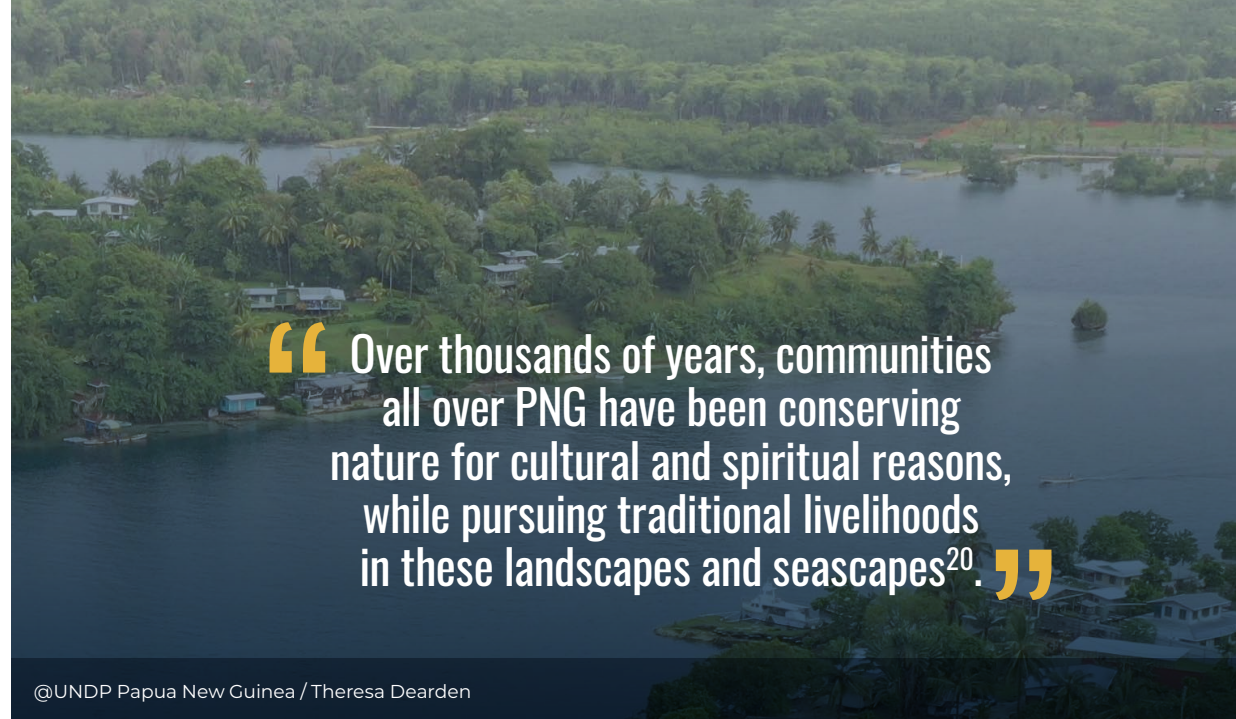18. Kay Kalim pers.comm

THE PNG METT | **LESSONS LEARNT**[19]

> **Over thousands of years, communities all over PNG have been conserving nature for cultural and spiritual reasons, while pursuing traditional livelihoods in these landscapes and seascapes**[20].

@UNDP Papua New Guinea / Theresa Dearden

🎖 A LARGE-SCALE ASSESSMENT IS REWARDING BUT DEMANDING

In PNG, the METT assessment was critical and beneficial for establishing an information base, making contact within protected area communities, and re-invigorating the protected area network. Assessing and analysing PAME across the country (link to outcomes) has led to in-depth understanding of PNG's situation through the words and experiences of local people. Benefits from the project are still emerging after more than five years as CEPA staff and communities continue to improve management standards. These benefits are not seen in other projects where METTs were completed quickly in the office to meet reporting requirements.

The METT assessment in PNG has demanded patience, time, and outstanding coordination and communication. Close attention to detail was needed at every level from crafting the ideals and objectives to logistical issues such as the safety and welfare of participants from remote areas. For future assessments, there is a strong case for employing a logistics officer for managing details and communication around meetings and their outputs.

🤲 INTERIM SMALL-SCALE ASSESSMENTS CAN BE COST EFFECTIVE

A process like that undertaken in PNG is only possible with adequate resourcing, expertise and enthusiasm, and cannot reasonably be undertaken across the country every year. A more streamlined approach can be used to reduce time and costs in between comprehensive site-based assessments. For interim reporting of management effectiveness (and mid-term GEF reporting) it may be effective to use the initial METT data and merely update scores; and to check if there are any major changes (e.g. in threats or values or investment). These would not, however, replace the need for full network-wide assessments at regular intervals – perhaps every 7-10 years.

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19. Many general principles for undertaking management effectiveness assessments and the METT are available. This article discusses what was learned in addition through conducting many workshops and compiling the information in PNG.
20. Independent State of Papua New Guinea (2014), p.7

COMMUNITY ENGAGEMENT IS CHALLENGING AND REQUIRES PATIENCE, RESPECT AND HUMILITY

Willingness to adapt to changing circumstances and working with flexible expectations and timeframes are essential when engaging communities even though it might increase the time and cost of the assessment. Where possible, the facilitation team should reach the workshop location a day earlier to make room for unforeseen delays such as cancelled flights or illness. Likewise, participants must be well supported in traveling to and from the workshop, as journeys can be long and stressful and require some recovery time[21].

PREPARATION, TRAINING AND SUPPORT MATERIALS CAN HELP DEVELOP A GOOD PROGRAM

High-quality learning materials specific to the PNG-METT2, including the facilitator guide, user-friendly Excel spreadsheet, glossary of key terms, workshop checklists, and communication templates are the key to building a cadre of experienced and capable assessors within CEPA.

A curriculum of self-paced learning materials were produced specifically for the PNG-METT2 training of government staff, to complement the general METT4 learning materials now available[22].

GOOD FACILITATION AND RECORDING ARE ESSENTIAL

Competent facilitation of METT workshops is a key skill for gaining the respect of participants and ensuring that they are comfortable speaking about their protected area. The skills include listening, achieving consensus and acknowledging all viewpoints non-judgmentally. The literacy and English language levels of participants should inform the style and content of communication so that no one feels at a disadvantage. Participants should feel free to respond in *tok ples*, their local language. Drawing can also be a valuable medium of expression.

Recording is based on excellent listening skills and a comprehensive understanding of the questions. Without good records, there can be no meaningful reports or communication products. Participants' responses should be recorded in detail as far as possible rather than being summarised. With their explicit consent, audio recording or videos may complement note-taking. Information management, including data governance and storage, is also critical and should be sorted out in advance.

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21. Some participants travelled for up to two days, including walking long distances to transport hubs or airstrips.
22. Materials are available at https://www.protectedplanet.net/en/thematic-areas/protected-areas-management-effectiveness-pame?tab=METT.

THE PNG METT | **LESSONS LEARNT**

> " We need gender opportunities in relation to education and training. There should be equal representation of women on the management committee. In traditional society, women are often not heard. The women need training in skills development to improve their leadership skills and this needs to include men to ensure that the needs of women are considered. "
>
> – TORRICELLI MOUNTAIN RANGE
> (PROPOSED) CONSERVATION AREA

⊥ WE NEED TO UNDERSTAND MULTIPLE PERSPECTIVES AND CONTEXTS OF NRM

Open and patient discussions with customary landowners and managers provide a sound basis for improving natural resource governance and management planning across the network of protected areas. The new PNG-METT2 documents benefits, negative impacts and strengths and weaknesses, and makes recommendations for improving the management for specific protected areas as well as for a more effectively managed protected area network.

⚖ WORKSHOPS NEED EQUITABLE REPRESENTATION

The representation of women and youth at the METT workshops was often poor, despite our requests to hear their voices. Due to social norms, women who did attend were at times reluctant to speak freely, though this was not consistent across workshops as the role of women varies between different community cultures. The PNG-METT2 includes a range of new questions on governance, particularly related to women and youth and these groups need to be included in METT assessments.

A community facilitator may need to visit the area in advance to advocate for the increased representation of women at the workshop. In some places, it may be worth considering a separate session only for women and other groups who may need a separate opportunity to speak. Including women in the facilitation team helps, especially for informal conversations with community women outside workshop sessions.

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> **People would like the results of research returned to the community to help with management**
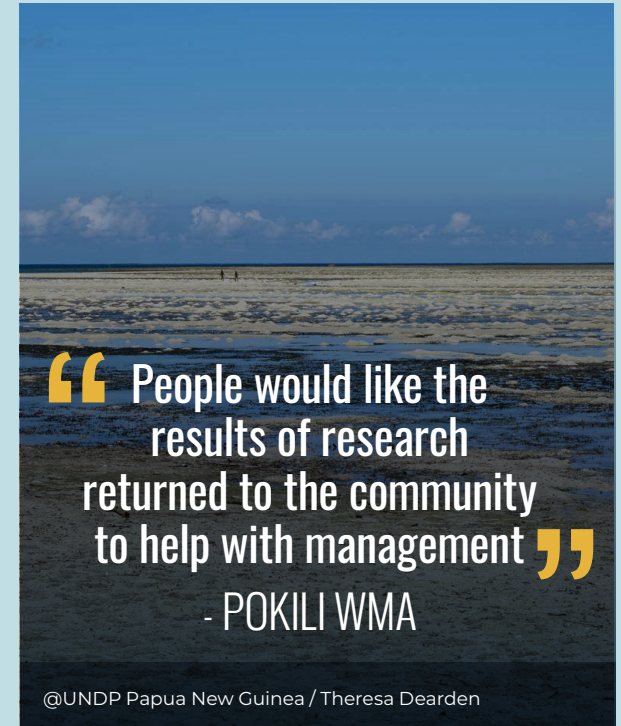> - POKILI WMA

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INFORMATION GOVERNANCE: RETURNING INFORMATION TO THE PARTICIPANTS AND COMMUNICATING RESULTS WIDELY IS IMPORTANT

Participants are generally keen on follow-up after workshops. However, such return communication has not always happened and needs to be built into project planning. METT results and summaries should be returned quickly to communities for validation and finalisation, and this return communication should be built into project planning.

The METT provides diverse recommendations about managing threats, improving planning, inputs, outcomes, outputs and governance of protected areas. This data should be effectively stored and readily accessible to inform decision-making at all levels of government and across sectors.
The overall report has a lot of information for a range of policy-makers and protected area managers, but can be dense for non-technical audiences. Summary sheets for distribution and presentation to key stakeholders, including government agencies and NGOs, and presentations directed at different stakeholders, are very useful.

FURTHER VERIFICATION OF THE CONDITION OF PROTECTED AREA VALUES IS NEEDED

There have been many calls to add objective data to supplement subjective METT data, which consists mainly of participants' opinions about protected areas and values. While many of the METT's discussion points are relevant and interesting, evaluators believe that including actual evidence from PAME, such as drone images or time-series of satellite imagery are also important[23]. An independent evaluation of the GEF project noted that a true measure of PAME would be scientific and objective information on the quality of habitats and biodiversity in specific areas. The 2016-2017 assessment included a limited analysis comparing outcome scores with spatial data on clearing, and found high correlation between the scores[24]. A complete analysis was impossible, however, because of inadequate spatial definition of protected area boundaries.

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23. Carter and Yuave (2020)
24. Leverington et al (2017)

CLOSING THE LOOP

Evaluation that does not improve management is no more than an audit. In PNG, the 2016/2017 assessment process did indeed influence national policy and actions, including through the creation of the PNG Biodiversity and Climate Fund. However, the overall findings and recommendations could have been addressed more consistently by UNDP and CEPA. For example, protected area communities have long pleaded for more consistent, long-term engagement rather than intermittent short-term projects, grants, and pilot activities. This is still difficult given the predominance of short-term funding opportunities, but more work on sustainable resourcing is now underway.

The management planning process will provide a strong mechanism for applying the information and recommendations from individual assessments of protected areas. Repeat assessments should look at past issues as well as recommendations and reflections on progress made.

For UNDP, there is a need for consistent, long-term commitment to its own cycle of adaptive management in relation to PNG's protected areas. A deep discussion of findings and recommendations from the assessments would help determine the highest priorities when funding future projects and programmes.

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