

Innovative Approaches Being Tried by the World Wide Fund For Nature (WWF) in Papua New Guinea to Enhance Access, Inclusion, And Equity in Conservation and Development Programming

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Abstract

The World Wide Fund for Nature in Papua New Guinea (WWF-PNG) with WWF-Pacific trialed the use of three innovative technologies to enhance the engagement of women and youth (aged 16-25) in project activities. The trial aimed at improving conservation practices and enhancing livelihoods in a remote setting. The trial included testing of three technologies (drone technology, camera trapping, and the KoboToolbox App). Overall, WWF considers the trial to have been an important first step in the trial of digital technologies to enhance the engagement of women and youth in conservation program activities. Their use aided in overcoming challenges due to the remoteness of Papua New Guinea (PNG) communities, as well as the absence of electricity and the internet in target locations; created new digital methods for obtaining and documenting Free, Prior, and Informed Consent (FPIC); enhanced inclusion and equity in conservation and development programming and overall promoted the use of technology in the not-for-profit conservation sector.

Introduction

In May 2024, the World Wide Fund for Nature in Papua New Guinea (WWF-PNG), with WWF-Pacific, trialed the use of three innovative technologies to enhance the engagement of women and youth (aged 16-25) in project activities. The trial aimed at improving conservation practices and enhancing livelihoods in a remote setting. The trial sought to overcome several challenges, including the remoteness of communities across Papua New Guinea (PNG), lack of access to the internet, and the lagging use of technology in the not-for-profit conservation sector.

The trial took place in the Kikori District of Gulf Province and engaged the Baina and Siawiti villages. The trial included testing of three technologies (drone technology, camera trapping, and the KoboToolbox App) which were new to Kikori communities, and included two tools not used by WWF-PNG before.

The program activities included a strong focus on Gender Equity, Disability, and Social Inclusion (GEDSI) due to the WWF-Pacific organization-wide mainstreaming of GEDSI catalyzed by the *Crosscutting GEDSI Program to Support Inclusive Conservation and*

Sustainable Development in the Pacific (GEDSI Program). This program is funded by WWF-Australia and is delivered in partnership with the Australian Government through the Australian NGO Cooperation Program (ANCP) and with support from corporate partner John West.

Drone Technology

Program Objective: Rapid biodiversity surveys and participatory mapping of proposed community conservation areas to understand the local biodiversity and cultural values to protect.

To support the above program objective, an in-community trial of drone technology controlled by local communities was enabled through the engagement of two local non-government organizations: the PNG Flying Labs and the Advancing PNG Women Leaders Network (APWLN). The activity facilitated hands-on use of drone hardware and technology to illustrate how they can be used to achieve program impact. In this instance, they are to be used to monitor and map land use over great distances, circumventing the need to travel individually to each location and enhancing efficiency and data collection.

Trial Reflections

WWF-PNG was able to facilitate the capacity building of women and youth to operate drone technology at an introductory level through the PNG Flying Lab partner facilitation. This would enable them to eventually conduct land use mapping once a conservation area is established and identify key areas in their communities, such as sacred sites, hunting areas, and tambu areas (no-take zones traditionally established to manage resources, e.g., wild meat or trees for development). The trial was able to enhance capacities in monitoring the area, and communities were able to trial technologies that are to be used in the program going forward.

The APWLN have been working with the Kikori communities for many years, and were relied upon to open channels of communication and make introductions for WWF to the Baina and Siwaiti people.

Basic government services such as schools, aid posts, clean water supply, and electricity are practically non-existent in these target locations. Youth, especially girls, engaged in the trial were empowered through instruction and demonstrated the confidence and capability to handle the drones. Youth male and female participants expressed a sense of achievement at their engagement, as well as expressing experiencing a window into the outside world through this technology.

Any new technology usage raises questions from local communities. For example, these two communities reside close to an oil and gas extraction site. Some questions were raised regarding whether drones may be used to surveil these extraction zones or detect oil and gas within their borders. PNG Flying Labs' team was able to enhance transparency by clearly exploring the parameters allowed for drone usage for the program with communities.

Challenges

Some hinderances to the drone testing included unfamiliar weather patterns, unfamiliarity with new drone technology and the accompanying app to collect waypoints, technical issues with a backup drone, and limited access to power to conduct more tests and troubleshoot for longer. However, initial response and uptake were sufficiently positive for the technology to undergo further trialing through the program.

Remote communities that have very limited access to technology are exposed through such a trial. WWF staff spoke of the advantages and disadvantages of technology as experienced in other countries and places. For example, contrasting the positives of extensive data capture through drone usage against concerns such as community privacy issues. WWF has noted that there is a need to keep continuing this conversation with the communities to unpack the derived meaning and impacts of such technology exposure to communities.

Camera Trapping

In addition to trialing drone technology, camera traps were used to detect species that were key to subsistence as part of the rapid biodiversity surveys and participatory mapping. Camera trapping, while widely used to identify, photograph, and map the presence and distribution of animal species in various locations, was trialed for the first time in these two communities. Some animals are linked to local folklore, and care was taken to consult communities for permission prior to setting traps along tracks at the forest edges.

Trial Reflections

Youth, both male and female, were taught how to utilize camera traps to pave the way for them to independently carry out biodiversity monitoring and identify key species within their forest areas.

Effort was taken to engage women in particular, to enhance gender equity in the use of technology in conservation activities. Out of a total of 162 overall participants from the two communities, 63 were women, both young and elderly, who were consulted on how they would partake with the goal of creating a conservation area within their tribal boundaries.

Through the trial, it became clear that youth were very keen to learn about how preserving their forest and river systems would effectively improve their lives. They were also able to learn the basics of camera trapping, drone operation for land use mapping purposes, and identifying the wildlife species present in their areas.

The exercise also highlighted the threat of mining and resource extraction happening a few kilometers from their homes. It was of importance to share the positives and negatives of committing to natural resource management as an alternative to engaging in extractive industries.

Challenges

Heavy rainfall and a shortened period of five days between Baina and Siawiti during the trialling period impacted the quality of detection on the camera traps.

KoboToolbox App

Program Objectives:

1. Communities and other stakeholders are consulted whilst promoting inclusivity and equity.
2. An initial livelihood needs assessment survey was carried out to understand community demographics, needs, and potential opportunities to support community development and well-being.

In pursuit of the above two objectives, a trial of the KoboToolbox App was conducted, allowing real-time, offline data collection.

Trial Reflections

The trial illustrated the potential for capturing data and community perspectives through the KoboToolbox App. It successfully captured WWF's approach to community consultation. Additionally, it enabled documentation of the process regarding Free, Prior, and Informed Consent (FPIC) before project implementation commencement, which is an incredibly crucial step in inclusive and bottom-up program design.

While noting that obtaining full FPIC was not expected as part of this initial process, the process (which should last throughout the project cycle) was able to commence, and crucially, an agreement from community leaders was documented. This was achieved through three main methods:

1. Multiple general meetings to engage and consult with the communities;
2. Focus group discussions and individual conversations with community members who approached WWF to share their information, ideas, or concerns; and
3. Individual surveys using the KoboToolbox App, with predesigned questions.

Participatory consultations occurred with landowners, community leaders, and other community members. There were also GEDSI focus group discussions held, illustrating the focus of this program on enhancing inclusivity and equitable conservation programming.

These discussions revealed that women have a pivotal role to play in important decision-making for their community, and this includes benefit sharing, community agreement signing, and other engagements beneficial or otherwise for the communities. Furthermore, it revealed that much of their time and energy is spent on domestic duties, including laborious tasks, which can be seen as a constraint to income generation for improved livelihoods. Their dominant activities include

making sago (staple food), gardening, fishing, and mending canoes and houses. The dominant church in this area is the Seventh Day Adventist (SDA), which has been an avenue for women's, men's, and youth groups to function.

Women, youth, children, and people with disability are often seen as vulnerable individuals impacted by marginalization and are not always afforded opportunities to partake in decision-making processes and provide their feedback and consent. However, the Kikori communities demonstrated strong inclusivity and respect for each other's opinions and representation. For example, each clan leader was asked to sign a clan confirmation of interest to work with WWF; out of 28 clans, two women, one child, and one man living with disability signed on behalf of their clan.

Further, given the issues of community remoteness and access to the internet, the KoboToolbox app allowed offline use without paper. It is planned to be utilized further with other communities, and its use is scaled up. In particular, in the future, it could assist with collecting disaggregated data to measure the exact interactions and impacts on youth, people with disability, and other groups. It could also be used to capture the number of women in leadership positions and the extent of their voices in important decision-making for their communities.

The next step for WWF and the Baina and Siawiti communities would be gaining full FPIC.

Challenges

Focus group discussions revealed that the Baina and Siawiti people in Kikori have had very little interaction with other conservation and non-government organisations and have minimal government service access. This has hindered access to education, growth of social capital, and economic and livelihood improvements of small to medium enterprises. How technologies can further strengthen linkages to NGOs and governments is to be explored.

Overall, WWF considers the trial to have been an important first step in the trial of digital technologies to enhance the engagement of women and youth in conservation program activities. Their use aided in overcoming challenges due to the remoteness of PNG communities, as well as the absence of electricity and the internet in target locations. It was clear that such technology could be a key step in documenting consultation and consent processes with communities as a crucial step in any conservation or development program. WWF and the Kikori communities will continue to explore and evaluate the impact and effectiveness of such technologies in programming and enhancing inclusion. The partnership between WWF and the communities will seek to strengthen conservation and development outcomes over time - with a key focus on inclusion and equity.