WORKING WITH VULNERABLE COMMUNITIES TO SUPPORT LOCALIZED CLIMATE ACTION THROUGH LEARNING

Case Study Final Report

Papua New Guinea

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Executive Summary

This case study examines the experiences of two communities in the central highlands of Papua New Guinea (PNG), investigating the impact of a Climate Communication and education initiative used by the Research and Conservation Foundation of Papua New Guinea (RCFPNG). The CCE initiative consisted of several strategies that were used to communicate, educate and build the capacity of these vulnerable communities to take action to address climate-related problems such as water shortage and topsoil erosion.

The case study assessed the effectiveness of various CCE delivery strategies such as face-to-face meetings and discussions, awareness and skills training, use of publications such as posters, and getting commitments from communities to take action. Our findings indicate that the three former strategies were well received by the communities, enabling them to understand the causes and effects of climate change better. Face-to-face meetings provided the avenue for informal discussions and enabled the communities to freely express their fears and doubts about climate change and its effects. In response, the communities pledged their commitments to take action, which they achieved as shown by their outcomes.

The findings of this case study indicated that the combined use of methods for CCE is crucial to enhancing climate communication and education efforts and achieving favourable outcomes for communities. However, the choice of strategies and their uses are context-based and must be designed with the target audiences in mind.

In addition, a lesson from this case study was that the communities' struggles to comprehend the changes observed since they were contradictory to local or Indigenous environmental knowledge and practices. These challenges were addressed through comprehensive strategies to deliver CCE that not only provided them with theoretical understanding of these situations but also a platform for those who face similar situations to connect and share their experiences.

The CCE initiative studied is context-based and guides target beneficiaries in recognizing the problems and their causes and concurrently developing action plans to address them. Such initiatives have long-term benefits and are sustainable.

CCE Initiative

In this case study, the experiences of one rural community and one semi-urban community in the Eastern Highlands Province of Papua New Guinea were examined to investigate the impact of a Climate Communication and Education initiative done by the Research and Conservation Foundation of Papua New Guinea, a conservation-based not-for-profit, non-government organization. The focus communities were one rural and another semi-urban community in the central highlands of Papua New Guinea, which are often known for their dense populations. Both communities comprised over 1,000 people, including women and children.

The issues addressed through the CCE initiative were two-fold. First, one community wanted to understand the reasons for increased flooding, leading to topsoil erosion. Second, the other community needed to understand why their sources of drinking water were declining and the extent to which these could become unsustainable if nothing was done. The communities invited RCFPNG to help them understand the causes of their problems better so that they can address

[1] The views in the report are not necessarily endorsed by the MECCE Project, which funded the research. This report was republished in 2025 following additional copy editing to increase the report's clarity.

the issues. Through communication and education, RCFPNG drew on the socio-emotional situation of the community to communicate the causes of climate change and its effects and what alternatives were available to address their concerns.

The CCE initiative designed by RCFPNG was intended to support the communities and was developed around four key strategies:

1. Face-to-face meetings and discussions, both small and large groups;
2. Climate awareness and skills training sessions with follow-up demonstrations;
3. Use of publications such as posters, brochures and leaflets;
4. Community commitments and interventions.

Strategy 1 involved conducting small and large group face-to-face meetings and discussions. In this case, the agenda for the meetings consisted of climate change or other related topics. At the meetings, the agenda was presented to the communities, and the meeting was facilitated to generate discussions or disseminate information on the causes and effects of climate change. Strategy 2 involved conducting community awareness training or specific skills training. For climate awareness, open outreach sessions were conducted to deliver or reinforce climate-related information, including food and water security. That is, general awareness training was aimed at disseminating general or specific information on climate change, including the causes, effects and measures for action. With regards to strategy 3, the publications are specifically designed to disseminate information on climate change causes, effects and measures to reduce the effects. These were also generic and addressed a wider audience, including those from other communities. Strategy 4 on community commitment and interventions involves communities committing to take action and follow this through with an actual action that addresses the identified problem

The underlying understanding of CCE is that if the socio-emotional abilities (fear of the unknown) of marginalized people in these rural communities were addressed through CCE interventions implemented by external sources, the people would better understand their situation (cognitive ability) to address their predicament and take practical actions to safeguard their food and water sources.

Case Study Methods

This case study aimed to investigate the impact of a CCE initiative done by the RCFPNG to determine the lessons that can be shared from this case. The case study also aimed to find how communities responded to this initiative and how they were able to translate this into action. The organization that carried out this case study is the Research & Conservation Foundation of Papua New Guinea, and its director is Sangion Appiee Tiu.

This case study intended to answer three interrelated research questions:

1. What key concerns do communities have about the impact of climate change?
2. What are the communities' perceptions about strategies used in climate change communication and education?
3. How can improved strategies inform policy and/or practice?

The first question examined people's fears and anxieties about the impact of climate change on their livelihoods. The second question attempted to reflect on the CCE strategies used by the

initiative in enabling communities to understand the causes and effects of climate change. The third question underpinned the notion that improved climate change communication and education strategies are to be addressed in policy and practice.

Data Collection and Participants

A sample of 20 participants was initially invited (10 from each community), but only 15 participated (eight males and seven females). This group comprised community leaders, farmers, women and youth. Each community was approached through their community leaders for permission to conduct the study. Since the community had interacted with RCFPNG during the implementation of its CCE initiative between the periods of 2020 - 2022, there was already a relationship between RCFPNG and the two communities that enabled access to each community. Individual consent to participate was sought from participants (Refer to Annex A for the Invitation and the Consent letters). The sample was chosen based on their previous engagement in CCE activities conducted by RCFPNG since 2020. The participants' ages ranged from 21 to 60 years (two participants were 21-30, five were 31-40, six were 41-50, and two were 51-60).

Based on the permitted day for each community, a team of researchers travelled onsite to conduct the interviews. There were eight participants (five females and three males) from Community One and seven (two females and five males) from Community Two. On each site, each researcher interviewed at least two participants for 50 to 60 minutes each. The researchers also observed each community to take note of any significant issues. Community One was a semi-urban community with most members practicing subsistence farming. The community occupies flatter areas along a big river and is exposed to flood plains, which flood during the wet season. On the other hand, Community Two is a rural area that occupies folding anthropogenic grassland areas which experience arid conditions during dry seasons.

Individual interviews and small group interviews comprising at least two people were used for data collection. The small group catered for those participants who felt the need to be interviewed together for support. The interview questions were written in English and Melanesian Pidgin, a Creole language that is widely spoken in Papua New Guinea (See Annex B for the interview protocol).

Case Study Findings

The CCE initiative is an example of community determination to overcome climate challenges. This was achieved through the involvement of external parties to help communities understand the reasons for their predicaments and identify actions that communities can take to minimize the effects of these problems. In addition, CCE was used to help these communities understand their issues and achieve their goal of improving their water sources and soil management issues. The findings of this case study also highlight the successes and challenges of each of the CCE strategies used by RCFPNG to disseminate information, knowledge, and skills.

Psychosocial Learning Dimension

This case study involved interviews with members of the two communities who were previously involved in a climate change initiative that incorporated CCE. The participants were mostly subsistence farmers who might be described as exhibiting fewer psychosocial concerns because of an existing traditional insurance policy. This policy, although unwritten, exhibits the concerns where one or several kinsfolks take responsibility for providing for their kinsfolk in times of need. For example, one female participant expressed that 'when the food becomes scarce, we must find means and ways to help ourselves. However, our friends and family in town come to our aid in supporting us with food" (RO5). Such actions release the burdens from the individual and

distribute them amongst several kinsfolk.

Action Learning Dimension

The action-learning in the CCE initiative is in which both communities identified the problems experienced and sought assistance from RCFPNG, who, together with the communities, developed CCE strategies to communicate and inform them about the science of climate change, its effects, and actions that can minimize its effects. Based on each community's needs, the identified problem was deliberated through additional skills training on specific actions each community took to address their problem. For example, in Community One, the problem identified was increasing soil erosion and the washing away of the topsoil due to flooding and heavy rains. Through the CCE initiative, both information about climate change and skills training on soil management and conservation were disseminated. For Community Two, their problem was water shortages due to climate change. The action learning in this context captured the two communities' efforts to take action to minimize their problems through the CCE initiative, enabling RCFPNG to determine the effectiveness of the CCE strategies used. This initiative also provided the two communities with the opportunity to reflect upon the results and make recommendations for further improvement and action.

Climate Justice

Issues about climate justice were highlighted by the participants of this case study , as indicated in the findings. The Government at the sub-national level is not providing the support needed by the communities to address their concerns. Community members (n=5/15 or 33%) have suggested that RCFPNG and other civil society organizations (CSOs) must work with the Government to inform them of community adaptation and mitigation projects. In addition, another 33% (n=5/15) of participants commented that the Government should include such community projects in its budget to prevent communities from struggling to find solutions for climate-related problems. The participants (n=8/15 or 53%) also highlighted the need for the Government to provide financial support for Civil Society Organizations that are actively involved at sub-national levels to empower communities to take action. Thus, the team conducting the CCE initiative intends to share recommendations through reports and publications for the responsible national and sub-national governments.

Indigenous Knowledges/Participatory Methods Influences

Indigenous knowledge was significant in this CCE initiative and the case study, as this was the prior knowledge that the communities had. The ability of the communities to recognize the climate-related problems was drawn from their Indigenous knowledge. This was especially the case when they recognized something was wrong with the planting and harvesting seasons. For example, one male respondent said that based on their Indigenous knowledge, they knew when to plant certain crops by observing the position of the rising and setting of the sun. However, they realized that the timing they used to follow in the past was not giving them the harvest they anticipated, as the sun's location at a certain point was either too long or too short, resulting in poor crop yields. It was then that they realized something was wrong (RN1). In addition, a female participant expressed that they used to observe natural signs (using Indigenous knowledge), so they knew when it was time to plant and when it was not. With the changes, they could not recognize these times, and the effects hit them hard (RO5). In these examples, the use of Indigenous knowledge enabled the communities to recognize that there was a problem that was beyond their understanding. Hence, they needed to seek help to get an explanation about what was happening to them.

To address such gaps in Indigenous knowledge held by communities, they were given the opportunity to reflect on the past and present changes during the implementation of the CCE

initiative. This allowed for any comparisons to be made and helped the communities to recognize the factors contributing to the problem and what they could do to minimize the effects.

Cultural and Regional Contexts Influences

Cultural influence was inevitable in this CCE initiative and subsequent case study. This is because the two communities in this initiative comprised tribal groups. As tribal peoples, cultural protocols are set, and external parties entering these communities are expected to adhere to them. One of the important protocols is associated with community entry. Often, community entry is allowed through the right of entry through birth, marriage, or other forms of relationship. As a result, RCFPNG had no difficulties seeking the communities' consent to participate because of a prior relationship developed through a previous project. Moreover, the date on which the interviews in this case study were to be conducted was culturally influenced. That is, the data collection had to be conducted when the community leader said it was okay for this to occur. This was because the communities had other engagements, and the interviews were one of those planned community activities that had to be completed on the date confirmed by the community.

Sharing Learnings Across Geographies

In terms of the learnings of this case study, the biggest learnings are:

1. Issues related to climate change, their effects, and solutions differ contextually. That is, what one finds as working for them in their part of the world may not necessarily work for another. Hence, understanding the contextual issues and challenges is critical to providing better solutions to minimize the problems.

2. Illiteracy in some parts of the world, like in Papua New Guinea, is the biggest obstacle to finding solutions for many climate-related problems.

3. This also means that CCE initiatives must be culturally relevant for communities to understand and act.

These learnings may be relevant to projects that involve Indigenous or vulnerable communities and those within the Oceania region that may have similar situations as in Papua New Guinea.

Case Study Impacts

Internal Impacts

The case study has identified the loopholes in our organization's CCE approach, which must be reviewed and thoroughly considered. For example, the most preferred CCE strategy by the communities were posters, brochures and leaflets (n=9/15 or 60%); face-to-face method of information dissemination (n=9/15 or 60%); and general awareness training sessions (n=9/15 or 60%). However, out of these, about 20% of participants (n=3/15) commented that they did not like the posters, brochures, and leaflets because it was problematic for illiterate participants who could not read. Another 7% (n=1/15) commented that they did not like face-to-face meetings because they were dominated by one person or a group of people who liked to talk.

The implication for our organization is that minor concerns like this should not be overlooked because, if not addressed, this may lead to further misconceptions.

Secondly, working with illiterate communities has implications for better and improved approaches to delivering CCE. In this initiative, while the common language of communication (Melanesian Pidgin) was utilized, the people interviewed (n=5/15 or 33%) also felt that

communicating the information using their local dialect would be more effective because they would understand better. In addition, follow-up on awareness training (n=2/15 or 13%), increased use of videos or clips (n=2/15 or 13%), and setting up of local community-based organizations (n=2/15 or 13%) were suggested as vital for the sustainability of the CCE work that was already introduced.

The quality of CCE is not something that can be compromised. It needs to be thoroughly explored and acted upon to ensure that the delivery of CCE is of the highest quality and is effective in its implementation.

External Impacts

On the question of broader implications or impact of this case study, at the local level, when communities are well organized and take action at their level, the impact is greater and is sustainable in the long term. In addition, communities need external help to ensure their interventions are effective. This implies that both civil society organizations (CSOs) and government at national and sub-national levels have a critical role in bringing such communities' efforts to fruition. For the government, this means ensuring there are budgets for community climate change efforts. For CSOs, continued technical assistance for a year or two should be planned, as this would ensure that community efforts receive technical inputs as and when needed after project completion.

These points were clearly expressed by the respondents. For example, 53% (n=8/15) suggested that the government could provide funding for CSOs to reach out to the communities, while 33% (n=5/15) suggested governments collaborate with CSOs to ensure community projects are successful as well as strengthen existing partnerships to effect this (n=5/15 or 33%). An additional 7% (n=1/15) suggested that the government could ensure climate change is integrated into school curricula at all levels to provide more breadth and width in its reach. The other 7% suggested that the sub-national government must conduct community visitation (n=1/15) and have a mechanism for seed distribution (n=1/15), particularly for drought-resistant crops.

The suggestions implicate policy changes at both national and sub-national levels to cater to community efforts to ensure sustainable, resilient communities are achieved.

Applicability and Scaling of the CCE Initiative

Understanding the context of the CCE initiative is crucial to determine what can and cannot work for the targeted audiences. In this context, there were many illiterate members in both communities. This meant designing interventions that considered this.

The strategies of the CCE initiative that were by far the most effective and can be replicated elsewhere included face-to-face meetings, climate awareness and skills training sessions, and use of publications. Moreover, in conducting training and climate change education, one of the lessons learnt was that each community had micro-needs that differed in some ways from others who experienced similar problems. The significance of these micro-needs was also determined by differing factors, including geographic locations, vegetation types, climate and other socio-economic situations or conditions. The second lesson was that rural communities knew their limitations and requested specific training or education to address their needs. Being vigilant is essential in recognizing genuine need areas that require external assistance. On the other hand, skills training was specifically about interventions that the communities had identified to address their climate-related problems. For example, Community Two identified the need to build a simple filtering device to filter their natural well or pond water before consumption. Hence, the construction of the biosand water filter. All these CCE strategies are

replicable and can be context-specific depending on the climate problem identified and the planned actions to be taken.

Appendix A: Interview Protocol

(Note: all personal details will be recorded in the field notebook)

1. What did you know about climate change before the awareness training? Explain your views.

2. What problem(s) relating to climate change was your community already experiencing before this training? Give at least 3 examples.

a. How did you know that these problems/problems you and your community were experiencing were linked to climate change? Explain.

b. How did the problem/problems in (2a) make you feel about:

c. Your existence as a community/people?

d. The local, provincial or national government? Your community leaders or MP?

3. What did you know about climate change before the awareness training? Explain your views.

4. What do you now know about climate change after the awareness training? How has this changed your view? Explain.

a. How was the awareness training delivered to your community? Describe the different ways you were assisted to learn about climate change and its effects.

b. Indicate if any of the following methods were used during the awareness training:

   Face-to-face meetings.

   Large group sessions/discussions:

   Awareness trainings:

   Use of posters, brochures, leaflets and pamphlets:

   Use of community theatre:

5. Commitments and pledges for adaptation and/or mitigation:

a. Which of the methods in (5) were very useful to you and why?

b. Which of the methods in (5) were NOT very useful to you and why?

c. How can your suggestion in (6b) be improved? Give 3 suggestions

6. How has acquiring the training benefited you and your community? Give at least 3 examples.

a. What can Civil Society organisations like RCF do to improve communication and education on climate change? Give at least 3 suggestions.

b. How should information on climate adaptation and mitigation be communicated to communities or other stakeholders?

7. What can the government do to improve its climate communication and education strategies? Give 3 suggestions

Appendix B: Interview Protocol in Melanesian Pidgin

(Not: Raitim olgeta pesenol toktok long wanpela fil buk)

1. Pastaim long RCF ikam givim trening, yu bin save pinis long klaimet senis em wanem samting o nogat? Inap yu givim sampela eksampol?

2. a, Bipo long RCF ikam givim trening awenes long klaimet senis, wanem sampela hevi bilong klaimet senis ibin istap pinis insait long kominiti bilong yu? Inap yu givim sampela eksampol?

3. Ol dispela hevi bilong klaimet senis istap insait long kominiti imekim yu igat wanem kain tingting long: (a) stap bilong yu na komuniti bilong yu insait long dispela hap? (b) ol lokol, provinsol na nesinol gavman? (c) ol kominiti lida na memba bilong yu insait long palamen?

4. Wanem kain samting yu save pinis nau long klaimet senis? Inap yu givim sampela eksampol?

5. Taim RCF igivim skul or trening long kominiti bilong yu, ol ibin yusim wanem kain rot long givim yuplea dispela treining awenes? Inap yu givim eksampol long wanem rot o wei RCF ibin givim dispela trening long klaimet senis? b. Putim wanpela tik mak antap long box wei isoim kainkain wei RCF ibin givim skul long klaimet senis:

   Pes to pes miting.

   Bung na toktok long bikpela grup:

   Awenes trening:

   Long rot bilong ol posta, na ol narapela liklik pepa:

   Rot bilong usim tiata o drama:

   Tokaut long kamapim na sainim tokorait o konsevesin did long kominiti long wok bilong adeptesin na mitigesin.

6. Wanem ol dispela rot bilong givim awenes em yu lukim or painim olsem INO halivim yu long klia gut long klaimet senis?, Inap yu tok klia long ansa belong yu. Long wanem rot bai ansa bilong yu long antap iken senis? Givim exksampol?

7. Long wanem rot ol skul na trening yu kisim ibin helpim yu na kominiti bilong yu. Givim eksampol long dispela.

8. a. Ol NGO na CBO imas mekim wanem long kamapim gut rot bilong givim skul long klaimet senis? Yu gat sampela tingtng long dispela we yu ken givim? b. Long wanem wei yu ting ol infomesin na toktok bilong kalimet semis imas igo aut long ol pipol na kominiti?

9. a. Yu ting ol gavman imas mekim wanem long strongim ol toktok na skul bilong kalimet senisn?

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