



FINAL REPORT

VULNERABLE COMMUNITIES AND CLIMATE CHANGE COMMUNICATION AND EDUCATION

2022-2023 Case Studies Cohort
Papua New Guinea

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Vulnerable Communities and Climate Change Communication and Education | Papua New Guinea Case Study

Summary

This CCE initiative is a case study that used the experiences of two communities in the central highlands of Papua New Guinea to investigate the impact of climate communication and education strategies used by the Research and Conservation Foundation of PNG. The CCE strategies were used to communicate, educate as well as build the capacity of these vulnerable communities to take actions to address climate related problems such as water shortage and topsoil erosion.

The initiative was interested in assessing the effectiveness of various CCE delivery methods such as face to face meetings and discussions, awareness and skills training, use of publications like posters and getting commitments from communities to take action. The findings indicated that the three former methods were well received by the communities as these enabled them to better understand the causes and effects of climate change. 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 to these, the communities pledged their commitments to take actions which, they clearly achieved as indicated by their outcomes.

The findings indicated that a combined use of CCE methods is crucial to enhancing climate communication and education efforts and achieve favorable outcomes for the communities. However, the choice of methods and their uses are also context based and need to be designed with the target audiences in mind.

In addition, an important lesson from this CCE initiative was the communities' struggles to comprehend the changes observed, which were also contradictory to local or indigenous environmental knowledge and practices. These challenges were addressed through comprehensive CCE methods that not only provided their theoretical understanding of these situations but also a platform for those who face similar situations to connect with each other and share their experiences.

The CCE strategies are context based and guide target beneficiaries to both, recognize the problems and their causes and concurrently, develop action plans to address these, Such strategies have a long term benefit and are sustainable.

Report

The CCE Initiative

In this CCE initiative, the experiences of one rural community and one semi-urban community in the Eastern Highlands Province of Papua New Guinea were used to investigate the impact of climate communication and education strategies used by the Research & Conservation Foundation of PNG (RCFPNG), a conservation-based not-for-profit, non-government organization. The issues addressed through CCE were two-fold. First, one community wanted to understand the reasons for increased flooding leading to topsoil erosion. Second, the other community's need to understand why their sources of drinking water were declining and the extent to which these can 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 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 aim of this case study was to investigate the impact of climate communication and education strategy used by the RCFPNG to determine the extent of the impact and the lessons that can be shared with others. The study also aimed at finding out how communities responded to this strategy and how they were able to translate this to action. 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 of more than a 1000 people including women and children.

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

The Case Study

The organization name is "Research & Conservation Foundation of Papua New Guinea". Director is Sangion Appiee Tiu.

This was a case study and as such, it intended to answer three interrelated research questions which are as follows:

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 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.

Case study methods and participants

A sample of 20 participants were initially invited (10 from each community) but only 15 participated (8 males and 7 females). This comprised of 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 climate change project between the periods of 2020 to 2022, there was already a relationship that existed between RCFPNG and the two communities that enabled access to each community. The individual consent to participate was sought from those participants who through their community leaders (Refer to Annex A for Invitation and the Consent letter). The sample was chosen based on their previous engagement in any form of Climate Communication and Education activities conducted by RCFPNG in the past three years. The participants' ages ranged from 21 to 60 years. Of this, two participants were in ages 21-30, there were five participants ages 31-40, six were ages 41-50 and two were ages 51-60.

Based on the permitted day for each community, a team of researchers travelled onsite to conduct the interviews. There were 8 participants (5 females and 3 males) from Community 1 and 7 participants (2 females and 5 males) from Community 2. 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 1 was a semi-urban community with most of its members practicing subsistence farming. The community occupies flatter areas along a big river and is also exposed to flood plains which are flooded during wet season. On the other hand, Community 2 is a rural area that occupies folding anthropogenic grassland areas which experience very dry arid conditions during dry seasons.

The method used for data collection was mostly individual interviews and small group interviews comprising of at least two people. The small group catered for those participants who felt the need to be interviewed together for support (See Photographs I and II). The interview questions were written in English as well as Melanesian Pidgin, which is a creole that is widely spoken in Papua New Guinea, during the actual interview (See Annex B for the interview protocol).

Advancing Quality CCE through this Case Study (findings)

This initiative was 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, Climate Communication and Education was the strategy used to help these communities to better understand their problems and achieve their goal of improving their water sources and soil management issues. The findings of this case study also highlight the success and challenges of each of the CCE methods used by RCFPNG to disseminate information, knowledge and skills.

Psychosocial dimension

This initiative mostly involved interviews of members of the two communities who were previously involved in a climate change project that incorporated communication and education as a strategy to achieve its purpose. The participants were mostly subsistence farmers who could be described as exhibiting less psychosocial concerns because of existing traditional insurance policy. Such 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 have to 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 an individual and distributes them amongst several kinsfolk.

Action-learning dimension

On the other hand, the action-learning in this project, is whereby 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 be taken to minimize the effects. Based on each community’s needs, the identified problem was deliberated through additional skills training on specific actions which each community took to address their problem. For example, in Community 1, the problem identified was increasing soil erosion and washing away of topsoil due to flooding and heavy rains. Using CCE, both information about climate change as well as skills training on soil management and conservation were disseminated. For Community 2, 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 methods used and in the process, enable RCFPNG

to determine the effectiveness of the CCE strategies used. This case study also provided the two communities with the opportunity to reflect upon the results and make recommendations for further improvement and action.

Climate justice

Issues pertaining to climate justice were clearly highlighted by the participants of this initiative 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. Communities (n=5/15 or 33%) have suggested that RCFPNG and other civil society organizations (CSOs) must work together with the Government to inform them of community adaptation and mitigation projects. In addition, another 33% (n=5/15) 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 findings (n=8/15 or 53%) also highlighted the need for Government to provide financial support for Civil Society Organizations who are actively involved at sub-national levels to empower communities to take actions. Thus this initiative intends to share its recommendations through reports and publications for the responsible national and sub-national governments.

Indigenous knowledges/participatory methods influence

Indigenous knowledge was significant in this initiative because this was the prior knowledge that the communities had. The ability of the communities to recognize the climate related problems was also drawn from their indigenous knowledge. Particularly, where they recognized that there was something wrong with the planting and harvesting seasons. For example, one male respondent said that based on their indigenous knowledge, they knew about 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 location of the sun 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. But with the changes, they are not able to recognize these times and the effects just hits them hard (RO5). In these examples, the use of indigenous knowledge as prior knowledge enabled the communities to recognize that there was a problem that was beyond their understanding and hence, they needed to seek help to get an explanation about what was happening to them.

To address such gaps in the prior knowledge (indigenous knowledge) held by communities, they were given the opportunity to reflect on the past and present changes during the implementation of CCE. This allowed for any comparisons to be made and help the communities to recognize the factors contributing to the problem and what they can do to minimize the effects.

Cultural and regional contexts influence

Cultural influence was inevitable in this initiative. This is because the two communities in this initiative were comprised of tribal groups. As tribal peoples, cultural protocols are always set and external parties entering these communities are expected to adhere to these protocols. 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 in 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 project were to be conducted were culturally influenced. That is, the data collection had to be conducted when the community leader said that it was okay for this to occur. This was because the communities have other engagements and the interviews were one of those planned community activities that had to be done on the date confirmed by the community themselves.

Sharing learnings across geographies

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

(i) Climate change related issues, 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 are critical to providing better solutions to minimize the problems.

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

(iii) This also means that CCE strategies developed must also be culturally relevant for communities to understand and act.

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

Impacts of the Case Study

Impacts at the Internal Level

The case study has identified the loopholes in our organization's CCE approach which needs to be reviewed and given thorough consideration. For example, the most preferred CCE methods 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 the general awareness trainings sessions (n=9/15 or 60%). However, out of this about 20% (n=3/15) also commented that they did not like the use of 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 the face to face meetings because this was dominated by one person or 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 also has implications for better and improved approaches for delivering CCE. In this initiative, while common language of communication (Melanesian Pidgin) was utilized, the communities (n=5/15 or 33%) also felt that communicating the information using their own local dialect would be more effective because they would understand better. In addition, follow-up on awareness trainings (n=2/15 or 13%), increase used of videos or clips (n=2/15 or 13%), and setting up of local CBOs (n=2/15 or 13%) were suggested as vital for the sustainability of the CCE work that was already introduced.

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

Impacts at Different Levels

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

These were also clearly expressed by the respondents. For example, 53% (n=8/15) suggested that the government provides funding for CSOs to reach out to communities while 33% (n=5/15) suggested that 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 ensures climate change is integrated into school curriculum at all levels to provide more breath 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 in place for seed distribution (n=1/15) program particularly for drought resistant crops.

The suggestions clearly implicate policy changes at both national and sub-national levels to cater for 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 high numbers of illiterate members in both communities and this meant designing interventions that took this into consideration. CCE strategies designed by RCFPNG were intended to support the communities' interventions and were hence developed around four key ideas:

- (i) Face to face meetings and discussions, both small and large groups;
- (ii) Climate awareness and skills training sessions with follow-up demonstrations; (iii) Use of publications such as posters, brochures and leaflets;
- (iii) Community commitments and interventions.

By far, the strategies that were considered effective and can be replicated elsewhere included points (i), (ii) and (iii). That is point (i) involved conducting both small and large group face to face meetings and discussions. In this case, the agenda for the meetings was 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 such as on the causes and effects of climate change. Point (ii) 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 dissemination of general or specific information on climate change including the causes, effects and measures for action. 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 to others who experienced similar problems. The significance given to these

micro-needs were also determined by differing factors including geographical locations, vegetation types, climate and other socio-economic situations or conditions. The second lesson was that rural communities knew their own limitations and hence, requested for specific training or education to address their needs. Being vigilant is essential in recognising 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 2 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 as shown on Photo 5 and Video 1. With regards to point (iii), the publications are specifically designed to disseminate information on climate change causes, effects and measures to reduce the effects. These were also generic in nature and addressed a wider audience including those from other communities. Point (iv) on community commitment and interventions involves communities making a commitment to take action and follow this through with an actual action that addresses the identified problem. All of these CCE approaches are replicable and can be context specific depending on the climate problem identified and the planned actions to be taken.

Annex A: Invitation and Consent Letter



RESEARCH & CONSERVATION FOUNDATION OF PAPUA NEW GUINEA
P.O BOX 1261, GOROKA EASTERN HIGHLANDS. PH: 532 3211 FAX: 5321123

Date: 1st MAY 2023

File: ST-KOFOYUFO _____

Dear Participant,

**SUBJECT: INTERVIEW ON THE IMPACT OF CLIMATE CHANGE AWARENESS TRAINING
CONDUCTED AT KOFOYUFO VILLAGE IN 2020 AND 2021**

The Research and Conservation Foundation (RCF) is a conservation-based NGO that carries awareness and education on environmental topics. As such, in the period of 2020 and 2021, there were two separate awareness sessions conducted on the effect of climate change on soil erosion. Hence, RCF is following up on the impact of this training to find out what the participants have done.

As a former participant, RCF would like to seek your permission to conduct an interview with you regarding your opinions of the training and its impact on your community. If you agree, then please sign and return this letter to RCF.

Your interview day is scheduled for Wednesday 10th May 2023 at 10 am at Kofoyufo village, Iufiyufa.

Yours faithfully,

DR. SANGION APPIEE TIU, PhD
Director

CONSENT FORM

I, of village give my consent to participate in the interview. I also give consent to use of my photograph or video.

Signature: Date:



RESEARCH & CONSERVATION FOUNDATION OF PAPUA NEW GUINEA
P.O BOX 1261, GOROKA EASTERN HIGHLANDS. PH: 532 3211 FAX: 5321123

Date: 1st MAY 2023

File: ST-KOFOYUFO _____

Dia Patisipen,

**SABJEK: INTAVIU LONG SKUL RCF IBIN GIVIM LONG KLAIMET SENIS LONG KOFOYUFO
HAUSLAIN LONG 2020 NA 2021**

Rises na Konsevesin Faondasein (RCF) em wanpela NGO we isave givim ol skul na trening long ol wok bilong envairomen. Long 2020 na 2021, RCF ibin givim wanpela skul long Kofoyufo hauslain long klaimet senis na hevi kamap long graun. RCF nau i bihaninim dispela wok long ikam painim aut sapos dispela skul mipela givim igat gutpela kaikai long wok ol pipol imekim long kominiti o nagat.

Bikos yu bin kisim trening long dispela taim, RCF ilaik kisim tok orait bilong yu long intaviu wantaim yu long Trinde namba 10 dei bilong mun Mei long 10 kilok long Kofoyufo. Sapos yu wanbel orait yu ken sainim nem bilong yu long andanit bilong dispela leta.

Tenkiu,

DR. SANGION APPIEE TIU, PhD
Dairekta

TOK ORAIT FOM

Mi, bilong hauslain i givim tok orait bilong mi long dispela intaviu bai kamap. Mi tok orait long kisim piksa na vidio.

Siknesa: Deit:

Appendix B: Interview Protocol

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

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

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

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

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

(a) Your existence as a community/people?

(b) The local, provincial or national government?

(c) Your community leaders or MP?

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

5. 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:

(i) Face to face meetings.

(ii) Large group sessions/discussions:

(iii) Awareness trainings:

(iv) Use of posters, brochures, leaflets and pamphlets:

(v) Use of community theatre:

(vi) Commitments and pledges for adaptation and/or mitigation:

6. 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

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

8. 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?

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

Appendix B2: 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. a. Taim RCF igivim skul or trening long kominiti bilong yu, ol ibin yusim wanem kain rot long givim yuplea dispela trening 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:
 - (i) Pes to pes miting.
 - (ii) Bung na toktok long bikpela grup:
 - (iii) Awenes trening:
 - a. Long rot bilong ol posta, na ol narapela liklik pepa:
 - b. Rot bilong usim tiata o drama:
 - c. Tokaut long kamapim na sainim tokorait o konsevesin did long kominiti long wok bilong adeptesin na mitigesin.
6. a., Wanem ol dispela rot bilong givim awenes em yu lukim or painim olsem em halivim yu long klia gut long klaimet senis?, Tok klia long ansa bilong yu.
 - b. 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.
 - c. Long wanem rot bai ansa bilong yu long (b) antap iken senis? Givim eksampol?
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 tingting 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 senis?



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