

Ethics and methods in research for community-based adaptation: reflections from rural Vanuatu

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Introduction

In this article I critically reflect on participatory processes in vulnerability research in the context of community-based adaptation to climate change (CBA). CBA is an emerging form of bottom-up adaptation to climate change. CBA is distinct in that it focuses largely on empowerment or 'helping people to help themselves'. Planned CBA aims to reduce vulnerability to climate change by addressing local priorities and building on local knowledge and capacity. Unequivocally, CBA is something done 'with' rather than 'to' communities. As such, participatory learning and action (PLA) methodologies have an important role. CBA-specific toolkits are emerging, based largely on methods established in the disaster risk reduction (DRR) field.

Here, I reflect on the application of various participatory methods in the initial research or scoping stages, where the goal is to establish the problem and reflect local voices in knowledge creation. These reflections are based on my experiences conducting PhD research in rural Vanuatu, a

Pacific island Least Developed Country (LDC). I discuss the strengths and limitations of specific methods in the Vanuatu socio-cultural and climatic context and convey some lessons learnt from undertaking participatory vulnerability research outside the context of a funded project. I intend these observations to be useful for practitioners working in the CBA sphere, as vulnerability research is important for advancing knowledge for suitable adaptation and is often an important precursor to planning and action in a project setting.

Vanuatu and climate change

My research took place in three rural communities in Vanuatu between 2006 and 2008: Tangoa Island (Sanma Province), Mangaliliu Village/Lelepa Island (Shefa Province), and Mota Lava (Torba Province) (see Figure 1).

Vanuatu is in the path of tropical cyclones (November to May). It is subject to cycles of El Niño and La Niña, which, respectively, increase the risks of droughts and floods. Future climate change and sea-



Map prepared by Max Oulton, Department of Geography, Tourism and Environmental Planning, The University of Waikato.

level rise threaten to exacerbate the risks already posed from current variability and extremes. These will be the most significant implications in the short to medium term.

Generally, the implications of climate change are not yet 'obvious' at the community scale. Despite Vanuatu's highly variable and often disruptive climate, communities

have been dealing with climate stress for generations and, accordingly, participants in my research did not always have strong views on climate stress or climate change, and did not always consider these problems as priority concerns in the community context.

Climate change was an issue about which most participants already had a basic knowledge via radio, school, or government awareness programmes. In my introductory meeting in each community (and throughout the research process) I presented a simple awareness talk aided by pictures and diagrams. There were many questions and people showed much interest.

Research context and methodology

I spent approximately two months in each community. My research – in response to gaps identified by the Vanuatu Meteorological Service (VMS) – aimed to characterise local perceptions of vulnerability to climate stress to help bridge the gap between local-scale realities and higher scale decision-making processes for adaptation in Vanuatu and the wider Pacific. I worked via the VMS and the Vanuatu Cultural Centre (VCC). Field sites were chosen in response to VMS-identified data gaps. In each community I worked alongside a VCC fieldworker volunteer (or equivalent). The fieldworkers gained an in-depth understanding of climate change issues and community priorities which will enhance knowledge sharing and help to facilitate action past my visits. The VMS will use the research results to assist in adaptation project development. Although Vanuatu currently lacks ongoing community adaptation projects the research is intended to increase the knowledge base in Vanuatu to enable this to occur, particularly as part of the implementation of Vanuatu's National Adaptation Programme of Action (NAPA), completed in 2007.

As this was a PhD, my 'on-the-ground' research was not linked to a specific project or funding. There was no promise of exter-

nally facilitated follow-up activities in the communities involved. There are few organisations engaged in relevant and ongoing community-based project work in the outer islands of Vanuatu that I could have successfully linked up with. Where there is no clear, tangible, or material benefit for the community, the ethics of such an approach may be questioned. However, similar concerns may relate to ongoing adaptation work that is not informed by a foundation of intensive, detailed research. In this article, I will restrict discussion to the ethics and quality of various participatory methods within this 'research only' context, accepting that this, in itself, may be ethically questionable in the CBA field.

I used a mixture of participatory group and one-on-one methods to assess local perceptions and experiences of the:

- impacts of climate stress;
- ability to deal with climate stress; and
- relationship of this to wider non-climate stresses and processes of change in the community ('multiple stressors').

Methods were drawn from CBA and DRR toolkits (see Nakalevu, 2006, McFadzien *et al.*, 2005, International Federation of Red Cross and Red Crescent Societies, 2007 and Vrolijk, 1998), and were trialled and modified during the research. All methods were gender segregated to suit local cultural situations. Group activities used existing community groupings (usually church-related) to limit intrusiveness and difficulties with logistics. Groups generally included five to 15 individuals. Some were age specific. For instance, historical timelines were undertaken with elders. All research activities were undertaken in Bislama (a Vanuatu dialect).

I ended each visit with an interactive community meeting, where knowledge was shared and discussed. This also provided a good opportunity for triangulation. Discussions often continued well into the evening. In addition, knowledge was documented in

Table 1: Strengths and limitations of participatory techniques employed in the research context		
Method	Strengths	Limitations
Seasonal calendar	Highly beneficial to researcher for understanding relationships between natural resource-based livelihoods, climate, weather, and disasters.	Limited learning outcomes for participants. The complex and time-consuming construction of the calendar allowed little time for discussion. Would be better done in two sessions: one for construction, one for discussion. Participants were unfamiliar with a 'calendar' format and therefore reluctant to engage.
Community and resource mapping	Beneficial to researcher and participants for identifying locations at risk and access to resources and services important to livelihoods and coping with disaster.	Maps generated superficial information as construction was time-consuming at the expense of discussion – participants concentrated on drawing an accurate map. Best done in two sessions to allow for in-depth discussion.
Matrix rating e.g. of resource use, coping strategies etc.	Good for stimulating group discussion and interaction as the rating is impossible to do with one or two of the most vocal or confident group members only. The concept is relatively straightforward and the matrix grid can be prepared beforehand leaving more time for discussion.	Limited outcomes for researcher as the ratings tended to be 'ad hoc', disguising complex contextual and temporal differences.
Focus group	Few.	Shyness and overall reluctance to participate in the absence of a visual activity around which to focus discussion.
Transect walk	Flexible, interactive, informal, enjoyable for participants, informative for researcher. Very useful for researcher orientation early on in the research.	Can be difficult to maintain focus as many issues are addressed. Limited participant learning outcomes as limited opportunity for collective discussion about any one topic.
Historical timeline	Effective catalyst for discussion regarding changes and trends over time in coping strategies etc. Effective tool for analysing the underlying drivers of vulnerability. Best done over multiple visits with a small group. Enjoyable for older participants.	Time-consuming, easy to get off track.
<i>Storian</i> : Semi-structured and informal interview	Effective for building rapport enabling in-depth participant-researcher knowledge exchange and accurate representation of concerns. Enables depth of discussion necessary for understanding underlying drivers of vulnerability. Less intrusive to daily life than group activities.	Little participant-participant collective knowledge exchange and consolidation.
Observation	Non-intrusive, effective for building rapport, informal and enjoyable for participants.	Time-consuming for researcher and unstructured.



Photo: Olivia Warrick

A participant draws a trend line showing change over time in knowledge of traditional medicine, as part of a historical timeline activity.

short reports (in Bislama) and sent back on request to community leaders. They felt that having 'formal' documentation increased legitimacy and pride in the consolidated knowledge, increasing motivation to address the issues highlighted by the community.

Limitations and strengths of participatory methods

Table 1 summarises the specific participatory techniques used, and the main strengths and limitations of each in this particular research context.

Using a participatory approach I intended to maximise community benefits via the research process itself, even though I was unable to provide material outcomes. My intention was to facilitate community learning and empowerment through collective discussion of problems, knowledge consolidation, opinion sharing, and realisation of existing capacities. In reality, what I could achieve was less than

expected. This subsequently influenced the methods I decided to prioritise. 'Interviewing' methods emphasising participant-researcher knowledge exchange were generally more successful than larger-group activities aimed at collective participant-participant knowledge sharing.

Limitations

I began my research in Tangoa Island using predominantly group methods. At the conclusion of my research in Mota Lava, I was using predominantly interviewing methods. This was largely a result of the research context. In a more practically orientated project setting, group methods may have been more effective. Most limitations stemmed from the difficulties of being a single, independent researcher, from the low priority of climate concerns in the communities, and from the cultural specificities of Ni-Vanuatu society. However, I do not view this as a 'failure' of participation. Rather, a flexible

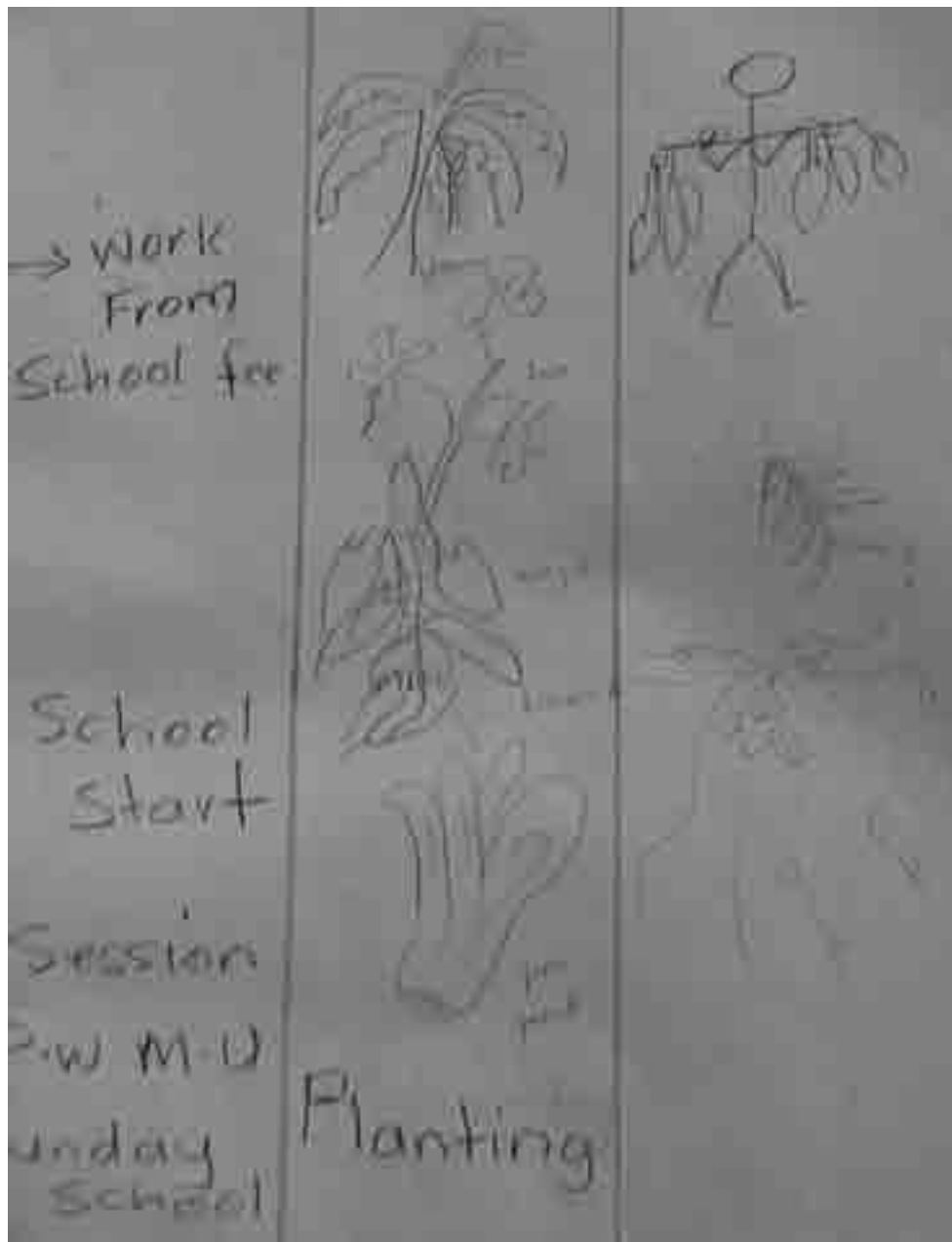


Photo: Olivia Warrick

A sample of participant illustrations from a seasonal calendar activity.

and relatively non-time constrained approach enabled a successful method – *storian* – to be developed, maximising local voices, accurately representing local priorities, and maximising learning within this particular cultural, research, and climatic context.

Participant outcomes

Although group activities often generated a good participatory **appraisal** – rapidly reflecting information and opinions across a range of stakeholders – collective knowledge creation, capacity realisation, and facilitated learning was limited. Due to my

relative inexperience as a facilitator, my status as a community and cultural outsider, and logistical problems as a single researcher, I felt unable to create the environment to achieve this. Group activities often felt forced and 'unnatural'. Participants were reluctant to interact or engage in the activity or discussion. I sensed that more educated participants found the activities somewhat patronising, and less educated or older participants were confused, shy, and unwilling to voice viewpoints. Finding a balance in the group setting was a challenge.

A major limiting factor was that participants often expected me to lead the activity. They were unaccustomed to interacting and discussing freely in a group. It was often difficult to convey that discussion and opinion sharing was the most important part – not drawing an accurate map, for example. In the communities, organised group meetings and decision-making processes are usually led by a 'chairman' or other leadership figure, with people contributing in turn. Another contributing factor may be the nature of 'awareness talks' administered by NGOs, aid organisations, and government in rural Vanuatu. Local people said that these mainly consist of an 'expert' administering a lecture. So an 'in-expert' outsider (me) facilitating discussion and interaction may be an unfamiliar and 'unnatural' concept.

The purpose of the group activities was somewhat unfulfilled. For example, in the seasonal calendar exercise participants requested that I ask questions which they then answered. Although this generated useful information for me, participant learning outcomes were not great. Similar situations arose when my local counterpart facilitated the activity. This type of activity would probably work better in a planning context. However, engaging in the activity itself may have contributed to the process of consolidating and clarifying knowledge and viewpoints, despite seemingly reluctant participants.

Research outcomes

Group activities were beneficial to my research, as they provided triangulation and a range of information in a short time. They also highlighted issues for further follow-up. However, most information generated was superficial due to time constraints and group size, with most time and effort dedicated to completing the actual activity (i.e. map, seasonal calendar) rather than to discussion. Often, the **reasons** behind the answers given were most important. However, group situations were not always conducive to exploring these.

Group activities generally generate good information regarding direct climate-related problems, ways of coping with them, and the strengths and weaknesses of these. In the context of CBA however, it is important to dig deeper, to understand the indirect situational factors and processes determining this over time. These will ultimately shape the ability of a community to generate their own solutions to climate stress and increased uncertainty in future. This required lengthy and in-depth discussion difficult to achieve in the large group activity setting. Successful instances were facilitated by smaller groups and by approaching the exercise informally; generally starting with an informal discussion with the actual activity as incidental.

Ethics

I decided to limit the use of large-group activities, instead emphasising interviewing techniques. Group activities can be disruptive to daily subsistence and economic activities. Climate stress is not generally viewed as a priority concern in the community, so interest in the activities was often low. Although participation was voluntary, I felt that given the 'research only' context, participants were not receiving enough gain from group activities to justify this intrusiveness on their busy daily lives. Perhaps in a project or decision-making context with tangible benefits to

Box 1: Excerpt from a *storian* on Mota Lava, 2nd November 2008 (English translation)

I am talking to participants A and B about the impacts of tropical cyclones (*hariken*), whilst we work in B's garden:

Me: So when the *hariken* came in 1939 you must have been 10 – do you remember it?

A: Yes! That's how I know I was born in 1929! ...Every tree went down, we were in Nerenigman [village] and we could see everyone at Totolag and Queremande as they made their cooking fires in the morning... there was a white man that had a small store on Ra island where my father worked and that day I went with him – and the big wind comes now! It came, it came, until it pulled off the roof belonging to the white man... the sea carried everything from the store right up into the middle of the island! We went and dug out tinned fish, soap – all things belonging to the store.

B: Worst *hariken* – we can't remember a worse one.

Me: You had a *hariken* this year – can you tell me about that one?

B: Food shortage now! Oh yes. First time is this year. Small, small *hariken* but...

A: Plenty *hariken* have hit us but we have not had food shortage. But this year – we have a shortage!

Me: So in 1939 do you remember a shortage?

A: Small, small. But all the old people before, they had good gardens and they stored plenty of dried breadfruit...

B: In 1972 it was the same. The gardens were strong.

Me: So what's different now?

B: I can't tell you straight – but I think it's because of a lazy fashion now! Oh, yes, they'll say they don't have enough land now, but the real reason is they don't want to work. There is enough land. We must plant something every day to make sure we have no shortage of anything – that was the fashion of the people before...

A: Custom! Custom belonging to us... must plant banana, taro, cabbage or what – every day.

B: That was the teaching belonging to our grandparents, that was the talk we used to hear in the *Nakamal* [meeting house], that was the talk we used to hear in the gardens with our parents. That was the talk before – before school came to Mota Lava. Plant plenty, plant a strong garden, then if disaster comes, you have food.

A: ...losing custom, that's why it happens. Losing the custom fashion belonging to the old people before.

follow, these participation limitations would have been less.

Strengths

One-on-one and small group interviews successfully facilitated participant-researcher knowledge exchange, catalysing further knowledge sharing between community members. This was largely at the expense of extensive collective participant knowledge sharing and exchange, but most beneficial to both participants and researcher in the particular socio-cultural and research context. I use the *Bislama* term *storian* – to 'chat, yarn, swap stories' (Crowley, 1995: 235) – to indicate this approach rather than 'interview', as this could be seen as an extractive and 'Western' method. *Storian* is an umbrella term indicating semi-structured interview, informal interview, and opportunistic discussion as part of observation. Irrespective of specific

method, the central feature of *storian* is building rapport with participants. *Storian* is essentially a Vanuatu-specific form of 'Talanoa': an established, culturally appropriate Pacific research methodology referring to 'a personal encounter where people story their issues, their realities and aspirations' (Vaiotelet, 1999-2003 cited in Vaiotelet, 2006:21). Box 1 provides an example of *storian*.

Participant outcomes

To '*stori*' is culturally a central and normal part of daily life. Knowledge is traditionally disseminated orally in Ni-Vanuatu culture. I found *storian* to be the most 'natural', non-threatening, and enjoyable research method for participants. Many community members enthusiastically volunteered for discussions, and were happy to dedicate long periods of time to *storian*. Many participants who were shy in group situa-



Photo: Amanda Leathers

A participant explains traditional methods of minimising erosion risk to me during *storian*.

tions – especially women and elderly participants – were more comfortable with voicing their opinion in a more personalised situation. Importantly, *storian* was generally less intrusive to daily commitments than group activities.

The approach was flexible – although guided to a degree by topic, discussions were led primarily by participant responses, enabling participants to highlight issues most significant to them. Importantly, knowledge generation was a two-way process. The relaxed and highly personal context of *storian* provided an opportunity for participants to ask questions of me. In this way, *storian* became an important platform for raising awareness of climate change issues in the community. Furthermore, through the course of discussion and issue probing, links between climate-related problems (such as decreas-

ing food security after cyclones) and more general problems (such as loss of traditional knowledge and ineffective community governance) were clarified for participants as well as researcher. In this way, the research was interactive, not extractive.

Research outcomes

One of the most significant benefits of *storian* is that it allows people's perspectives to be more adequately reflected as they talk around the topic in their own way. As such, the relative priority of climate-related problems in a context of multiple stressors could be better represented. This is fundamental to successful CBA as community-based initiatives or projects need to directly address locally perceived needs. *Storian* often began with an extensive discussion of general problems and

concerns in the community before addressing anything climate-related. Group activities were often either too climate stress-focused or too general to allow this relative priority to be accurately represented.

The *storian* technique built participant-researcher rapport. This was fundamental to the ‘accuracy’ of information created. In a project setting, concise participatory workshops are a good way of obtaining a range of viewpoints in a relatively short amount of time, as a basis for planning and action (van Aalst *et al.*, 2008). However, this has limitations as well as strengths. Based on experiences in Papua New Guinea, Mercer *et al.* (2008) identify that information gathered in initial scoping research can be incomplete and skewed in order to maximise assistance from external agencies. In my own experience I found that information (in both group activities and *storian*) was often initially biased towards what participants believed I wanted to hear – this was their way of being polite to a ‘guest’. During the course of *storian*, as personal relationships were built, discussions became far more frank. This is important to stress because CBA initiatives built upon less intensive and detailed assessment may be skewed towards the known agenda of the implementing agency – and may not be integrated with true community priorities. This is particularly important in communities like the three I visited, where the implications of climate change or climate stress are not a local priority and a more pro-active approach to adaptation is required.

Storian was often used in conjunction with a participatory activity, for example, historical timelines with small groups of community elders, developed over multiple sessions. A comprehensive historical picture was first built. I then focused *storian* around memorable periods of climate stress such as major cyclones or droughts, the impacts these had, and the ways in which people coped. The activity

often concluded with a lengthy discussion regarding the imagined implications of the most major climate event identified occurring today. Historical timelines were particularly effective at characterising the relationships between vulnerability to climate stress, and the ‘everyday’ stresses and opportunities shaping this.

Additional challenges in integrating climate change knowledge in PLA

Climate change adds an additional layer of complexity in PLA. Many CBA toolkits are based on those intended for disaster risk reduction. The difference is that knowledge of potential future changes in climate – and therefore an understanding of the need for adaptation – is largely held by ‘outsiders’ and is ‘top-down’. This creates particular challenges. CBA is ostensibly a community-driven process with local people, rather than outsiders, as the ‘experts’ in adaptation processes. In Vanuatu, addressing climate stress is not generally a community priority. Although at times extremely disruptive, cyclones, drought, and flooding are viewed largely as part of ‘normal’ life. Furthermore, where the implications of climate change are not yet obvious, motivation for adaptation (even if this is merely improved DRR) is likely to be external, at least early on. The nuances and challenges of integrating the concept of climate change into PLA warrants a paper in itself. Here, I address one aspect only: the way and extent in which I actually emphasised the notion of ‘climate change’ in *storian* and other activities.

Often, CBA-focused PLA toolkits emphasise ascertaining local observations of changes to climate or weather and resultant problems as a basis for developing adaptation strategies. I found that this approach usually over-emphasised shorter-term variability rather than identifying longer-term trends (including increased irregularity and uncertainty) as the toolkits intend. For example, participants in one community claimed to be experiencing

increases in various monthly rainfalls, but this perception was likely influenced by the La Niña occurring at the time – local weather station data did not back up this perception. Mataki *et al.*, (2007) experienced a similar issue in their work in Fiji. The Vanuatu climate is highly variable and this may risk attributing anthropogenic climate change – a problem caused by developed countries – to problems that likely result (mainly) from ‘natural’ variability, in participants’ minds. In the Vanuatu community context, vulnerability to climate change is primarily driven by decreasing ability to deal with **current** climate stresses (due mainly to social and economic pressures) rather than by ‘weather changes’ per se. In this situation, I found that this approach risked erroneously blaming climate change for decreases in adaptive capacity. The consequences of this may be a sense of disempowerment amongst participants. Although climatic variability and extremes have been locally dealt with for generations, I observed that many began to discuss these problems as stemming from forces outside community control and therefore, as requiring externally driven solutions (by government, aid donors, and NGOs). Creating a sense of ‘victimisation’ is not particularly constructive in the context of CBA in Vanuatu.

Emphasising how people **respond** to climate stress and how this has changed over time aided in avoiding this unnecessary misconception and sense of helplessness. I found that maintaining focus on issues which the community could potentially address itself enabled participants to realise and legitimise their own (fairly extensive) capacities to deal with an uncertain climate. In these specific community situations, vulnerability is constructed primarily by declining adaptive and coping capacity as a result of social and economic pressures. Changes in climate play a somewhat secondary (although obviously important) role in vulnerability to climate change.

Climate change mostly increases the importance of soundly dealing with current climate stresses rather than requiring significantly **different** responses at this scale. I emphasise that this may not make sense in every climate change impacts context. Again, the important lesson here is that different contexts call for different approaches in participatory vulnerability research – in both a cultural and climatic sense.

Conclusion

In this paper I offer some reflections on the ethics and quality of participatory processes in the context of community-scale vulnerability research. In CBA, a ‘learning-by-doing’, action research approach is heavily advocated. Developing practical solutions to problems via the research process itself is often emphasised, and this is reflected in many participatory toolkits. It is important however, that this does not come at the expense of first adequately establishing the problem, and this is where intensive and detailed research is important. Vulnerability to climate change is complex and place-specific and a realistic understanding of local perceptions is essential if resources and funding are to meet community adaptation needs. Climate change adds a further layer of complexity to disaster risk reduction in Vanuatu. Often, sustainable CBA initiatives will require finding creative ways to address local priorities whilst being proactively adaptive. Due to the ‘top-down’ nature of climate change knowledge, people will have little faith in an initiative that does not address current local priorities in some way. In this sense, locally perceived climate problems and priorities must be well contextualised and understood before planning and action takes place.

The methods most suitable for maximising positive participant and research outcomes for CBA are likely to be very context specific – both in terms of local

socio-cultural situations and research background and purpose. An important lesson learnt through my research is that flexibility, openness, and innovation in the research approach are most important to maximising learning and knowledge consolidation, accurately representing local voices, and ensuring research is informed by, and developed from, local priorities.

Participation may have somewhat different objectives in the 'research' than in the 'decision-making' stages of the CBA process, where planning and action is

more the focus. In my experience, techniques enabling depth of both information gleaned and participant-researcher knowledge exchange were more effective in a 'research only' context than techniques aimed at group, collective (or participant-participant) knowledge sharing, and capacity realisation. These may be more beneficial in the 'decision-making' phases of a project where the collective organisation, documentation, and clarification of knowledge can pave the way to action planning.

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