

DRAFT

GUIDELINES FOR COMMUNITY VULNERABILITY AND ADAPTATION ASSESSMENT AND ACTION (CV&A)

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“Genuine development means the construction by a human society of its own history, its own destiny, its own universe of meanings.”¹

The guidelines for Community Vulnerability and Adaptation Assessment and Action (CV&A) outlines 5 main preliminary steps to be followed by the Capacity Building for the Development of Adaptation Measures (CBDAMPIC) project in four Pacific Island countries (Cook Islands, Fiji, Samoa and Vanuatu) when carrying out a CV&A with local communities. These guidelines build on the various participatory methodologies that have already been introduced into the Pacific Islands which include; PLA (Participatory Learning and Action), Participatory Rural Appraisal (PRA) and CHARM (Comprehensive Hazard and Risk Management). The CV&A guidelines provide a broad framework for carrying out vulnerability and adaptation assessment with local communities. Experience gained during the course of the implementation of these guidelines in the four selected countries would help in refining the guidelines, which can then be used for similar purposes in other Pacific island countries.

¹ Goulet, D., “Culture and Traditional Values in Development” in Stratigos, S., Hughes P.J., (ed), *The Ethics of Development, The Pacific in the 21st Century* (1987), 165.

GUIDELINES FOR COMMUNITY VULNERABILITY AND ADAPTATION ASSESSMENT AND ACTION

1.0 Introduction

These guidelines on Community Vulnerability and Adaptation (CV&A) Assessment and Action outlines the various steps that will assist in the identification, analysis and development of community adaptation strategies to challenges and opportunities (risks) related to climate change². The CV&A guidelines is an anthology of activities that provides a learning process to empower local communities to identify, analyse, and develop ways and means of increasing their local adaptive capacity to current and future challenges and opportunities related to climate change.

These guidelines are based on the premise that Pacific islanders are continually adapting to climate change in their daily lives. In recent years, a number of studies reveal it is highly likely there will be an increase in the frequency and severity of climate related disasters in the future³. Coupled with other immediate and pressing needs such as economic development, poverty elimination, education and health; adaptation to climate change is becoming a difficult and costly exercise. This inability to adequately adapt does not in any way lessen the knowledge people have of their own situations. It is therefore important to fully involve local communities in analysing their own situations and identifying appropriate solutions to their vulnerabilities. These guidelines are also mindful of the need to exchange latest information and knowledge on the effects of climate change on local communities.

People do consciously and unconsciously carry out vulnerability and risk assessments in their daily lives. They also have their own ways of expressing and articulating their vulnerabilities and the risks they face based on their own environments, social and economic circumstances. For example, people have

² Climate Change in this guideline refers to any change in climate over time, whether due to natural variability or as a result of human activities (IPCC definition). This usage differs from that in the United Nations Framework Convention on Climate Change (UNFCCC), where climate change refers to a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods.

³ Jones, R.N., P.H. Whetton, K.J.E. Walsh, R. Suppiah and K.J. Henessy. *Scenarios of Climate Variability for the South Pacific*. In International Global Change Institute (IGCI) and South Pacific Regional Environment Programme (SPREP) (1999). PACCLIM WORKSHOP-Modelling Climate and Sea-Level Change Effects in Pacific Island Countries, August 23-27, 1999. International Global Change Institute. Hamilton, New Zealand.

Holland, G.J. 1997. The Maximum Potential Intensity of Tropical Cyclones. *Journal of Atmospheric Science*, 54: 2519-2541.

moved their dwellings inland away from the coast due to coastal erosion and storm surges associated with tropical cyclones. People have also experimented with different ways of harnessing water to keep a daily supply available during droughts. They have changed crops and cropping patterns because of salt-water intrusion and changing wind patterns.

2.0 The Challenge?

It has been recognised globally that most communities' ability to adapt to climate related risks are limited for many reasons but more so for Small Island Developing States (SIDS). The IPCC Third Assessment Report projects with confidence global average temperature and sea levels would rise under all scenarios (IPCC TAR). Projected increases in global mean temperatures from 1990 to 2100 for a range of plausible greenhouse gas emission scenarios lie between 1.4 - 5.8°C with global mean sea level expected to rise 9 - 88 cm by the year 2100 (IPCC TAR). The IPCC TAR also notes that increase in tropical cyclone peak wind intensities and mean and peak precipitation intensities are likely over some areas (IPCC TAR). .

The most significant and immediate challenges for SIDS are likely to be related to extreme climate events⁴. Changes in rainfall regimes, soil moisture budgets, the speed and direction of prevailing winds, short-term variations in regional and local sea-levels, and patterns of storm surges⁵ would have major impacts on the livelihood of many communities and their natural environments.

3.0 Community Vulnerability and Adaptation Assessment & Action -(CV&A)

3.1 What is CV&A?

CV&A is a systematic approach to assessing communities' vulnerability⁶ to climate change. The starting point of any CV&A is the community and the primary focus will be to identify and assess what climatic conditions, communities are vulnerable to in order to devise appropriate adaptive interventions⁷.

4 World Bank, 2000. Cities, Sea, and Storms: Managing Change in Pacific Island Economies. Vol. IV Adapting to Climate Change. Papua New Guinea and Pacific Country Unit. The World Bank. Washington, D.C. November 13, 2000.

⁵ Intergovernmental Panel on Climate Change (IPCC) 2001: *Climate Change 2001: Impacts, Adaptation, and Vulnerability*. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change

⁶ Vulnerability in this CV&A guidelines is defined as the susceptibility (degree of exposure) of a system to the effects of climate change and also its capacity to deal with the negative or positive effects of these changes (resilience).

⁷ Starting points to a vulnerability assessment vis-à-vis impact assessment are slightly different. See work carried out by Smit, B., and O.Pilifosova.2002. From adaptation to adaptive capacity and vulnerability reduction. In *Enhancing the Capacity of Developing Countries to Adapt to Climate Change*. eds S. Huq, J. Smith, R.T.J. Klein. Imperial College Press: London.

3.2 Purpose

To outline a systematic process to be followed or adapted by Pacific communities when carrying out a CV&A, in order to develop appropriate programmes that will assist in reducing the vulnerabilities of communities to climate change.

3.3 Target Group

This CV&A is developed for technical people (facilitators) and community workers. These users will be trained on how to use the guidelines when working with their local communities.

4.0 The CV&A Guideline

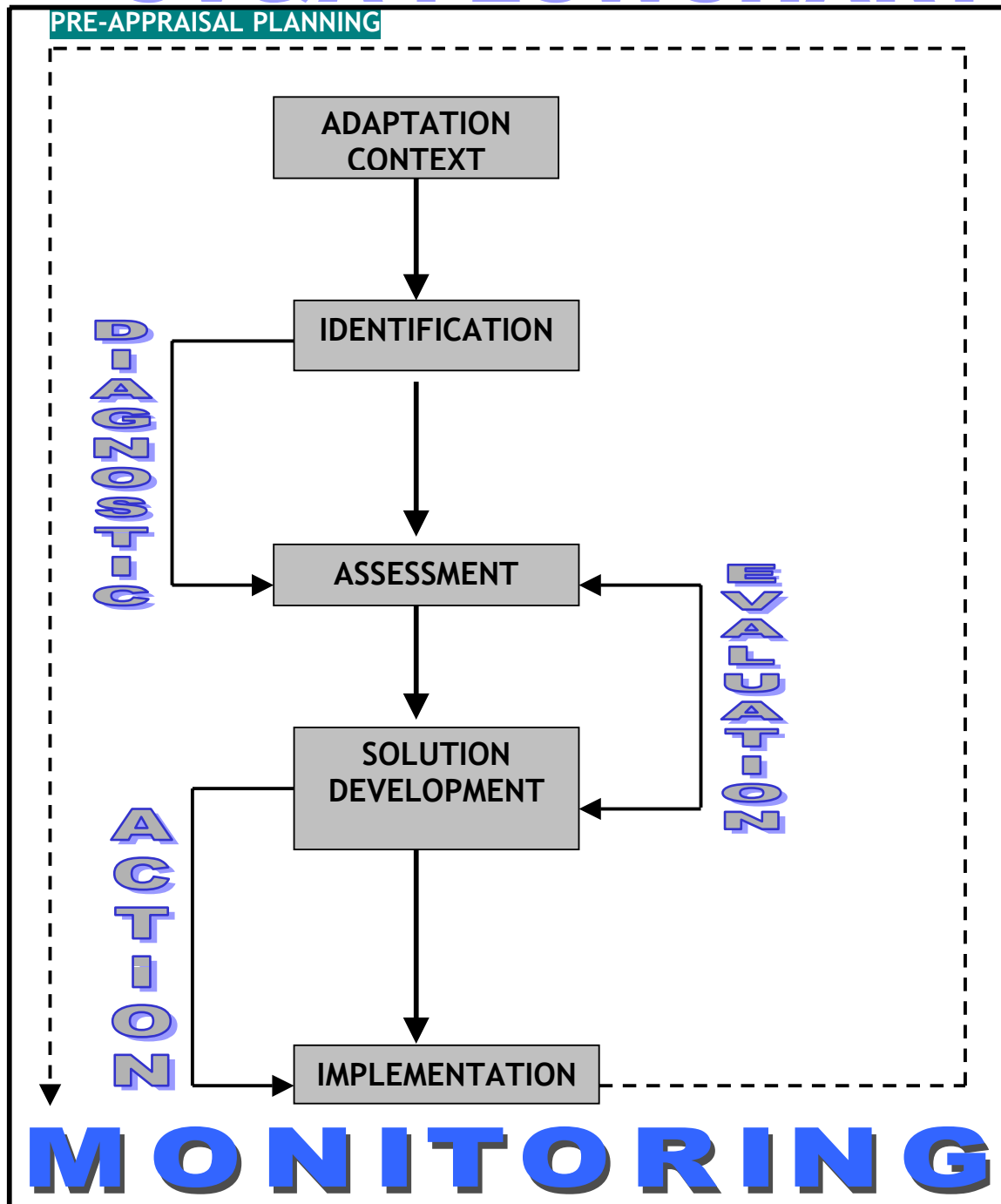
In principal, the CV&A guideline advocates six main phases:

1. Adaptation Context phase
2. Diagnostic phase
3. Assessment and Evaluation phase
4. Development phase
5. Implementation phase and
6. Monitoring phase

This is graphically illustrated by the flowchart provided below.

4.1 Flow Chart

CV&A FLOWCHART



The 6 main phases are summarised below:

4.1.1 Adaptation Context - Defining the policy framework that will guide the CV&A work with communities to which the work will contribute, the linkages from community to national planning processes and management issues that will have to be considered by the CV&A Team before carrying out field activities.

4.1.2 Identification of current risks - Identification jointly by communities and facilitators of the risks associated with climate change they face in their daily lives, using the participatory learning-by-doing (hands on) approach. The identification process will be a combination of awareness raising and information exchange between communities and facilitators.

4.1.3 Assessment of current and future risks - Assess with communities' causal relationship, of the risks they are facing (cause and effect relationship). For examples, how they are coping with present risks (traditional coping mechanism and response), how can their adaptive capacity be increased in the face of new climate related challenges, what systems are in already in place to cope with the effects of likely changes? Which regions, sectors and communities most likely to be impacted by climate change? What do they perceive as important for adaptation and what is their experience in coping with past extremes? How are the human consequences of climate change shaped by conjunctions and dynamic relationships between climate events and social and other climatic factors?

The assessment component would include determining (linking) how current risks faced by communities would manifest in future given predicted changes in climate scenarios.

4.1.4 Development and evaluation of adaptation options - develop with communities' possible solutions to the (challenges?) identified and their benefits (opportunities) or constraints. How does a solution differ from another in reducing vulnerabilities of communities e.g. reduction of losses versus costs of changes? This is also an opportunity to assess prospects for mainstreaming possible strategies. What adaptation actions can be incorporated into existing management and policy frameworks? Prioritisation of adaptation options will also need to be considered due to limited resources available; short term, medium term and long-term adaptation options. Are there any activities or actions that could be considered for adaptation?

Evaluation of adaptation options by relevant local, national or regional experts as the situation demands on how a preferred solution will reduce the vulnerabilities of communities to climate change What would be the evaluation

criteria - is it based on social, political, economic and environmental considerations? How would this be determined?

4.1.5 Implementation of adaptation initiatives - this refers to the actual 'action or undertaking' of solutions that have been identified and evaluated during the diagnostic and evaluation process. A proposal may have to be developed jointly with the community to identify what needs to be done, who does what and the resources needed. Are actions practical and socially and environmentally sound, are there resources available for these types of activities, what are the timelines, etc?

4.1.6 Monitoring - this refers to the need for ongoing monitoring and evaluation by the climate change country teams and SPREP on the progress of actions undertaken at community level throughout the project. If there is a need to reconsider project design for reasons and circumstances that the project comes across, then due consideration should be taken and solution development and implementation stage would need to be revisited.

4.2 PHASE 1 Climate change adaptation context

4.2.1 Purpose

The purpose of phase 1 is to define the policy framework that will guide the CV&A work with communities to which the work will contribute, the linkages from community to national planning processes and management issues that will have to be considered by the CV&A Team before carrying out field activities.

Task 1 Policy Framework

Identify the existing policy framework (or lack thereof) by which climate change adaptation work at national and community level will be guided or to which the work will contribute and the process that will ensure that community CV&A recommendations are taken into consideration into national planning and financial processes.

Task 2 Information Dissemination

Establish information dissemination mechanisms to advocate climate change adaptation to decision makers.

Task 3 Management Issues

To achieve the planned objectives of the CV&A, careful analysis and planning from its inception is crucial. This is to ensure that every aspect of the CV&A is discreetly mapped out, tested, refined and acceptable to the specific

communities before actual implementation takes place. Tasks to be undertaken prior to field activity:

- i) formation of a core multidisciplinary CV&A Team to be backed up by a capable facilitator;
- ii) to develop and agree on a conceptual and methodological framework that will serve to focus and guide data collection and subsequent analyses;
- iii) to ensure that the CV&A Team is fully aware of the framework and understands how it will guide their work;
- iv) Compilation of existing information on community to be visited e.g. geography, ethnicity, religious beliefs, major occupations, environmental data: including cyclone history/pathways, rainfall pattern, flood and drought records, type of agricultural crops grown etc.
- v) Clearly identify who your target groups are before carrying out a CV&A. A careful analysis of target group will need to be carried out before hand e.g. if male dominated should there be a need for breakout groups for women only, youths and older folks. Facilitators for women's groups may have to be women as it is not usually acceptable in some cultures for men who are not part of the community to be seen talking and discussing with women.
- vi) There may also be some participatory tools that will have to be prepared before hand to be introduced at the facilitator's discretion. Lessons from past experience suggest that if adequate attention is not given to details when working with communities important information may be missed in the data collection process. This fundamental problem may prove costly if distance and accessibility is a major factor.
- vii) Ensure that protocols (cultural and religious) are adhered to. It helps gain the acceptance and confidence of target community.

4.3 PHASE 2 Identification of current risks

4.3.1 Purpose

The purpose of phase 2 is to ensure that all climate-related vulnerabilities of communities are carefully identified and characterised.

Task 1 Identification

- i) Having determined the various groupings for the CV&A, administer pre-structured questions e.g. what are the natural occurrences in the community that reflect climate variability and extremes over the last 50 years or so?

- ii) What are the impacts of these natural occurrences on the socio-economic well being of local communities e.g. housing, income, food, education, health, portable water etc?
- iii) What are the different socio-economic groups and institutions/agencies in the area that are affected by climate variability and extremes?
- iv) Who are the vulnerable sectors in the community?
- v) What makes the different socio-economic groups vulnerable to climate
- vi) Do men and women give different weights/importance to climate change-related vulnerabilities?
- vii) Do different occupational groups (e.g. fishermen, day labourers, farmers) rank climate change-related vulnerabilities differently?
- viii) Types of 'social capital' that exists in communities (i.e., social organisations, networks, trading systems, etc) in order to surmise their adaptive capacity under current oceanic and climatic conditions. This sort of analysis/assessment may also include the role of governments (local and national), NGOs, churches, etc in building this social capital in times of extreme climatic events. This may also bring out the live experience of a climatic event, which could provide insights for future adaptation to climate change.

Task 2 Prioritisation

Due to limited resources available, communities have to determine which vulnerabilities they would like to further analyse in order to do something about it. There could be a combination of vulnerabilities that need to be looked at or a specific one. The communities will have to determine these and facilitators will assist and prioritise these risks or issues of concern.

Prioritisation would assist communities to make pragmatic choices and it could be carried out in a variety of ways. The purpose of prioritisation here would be to capture climate change related priorities that can be further analysed under the CV&A process. Other non-climate change related priorities identified by the community could be relayed to relevant agencies without spending much time in further analysing them. A very simple matrix such as the one below could be employed.

Example of Matrix for Ranking Issues by Magnitude and Significance

ISSUES & CONCERNS	MAGNITUDE			IMPACT		
	High	Medium	Low	High	Medium	Low
Water	✓			✓		
Erosion		✓				✓
Lack of moisture			✓			✓

A more sophisticated one could be developed, looking at the probability, magnitude, or potential impact areas and providing a matrix that can capture the above.

Example:

$$(\text{Frequency} + \text{Area Impact}) \times \text{Potential Damage Magnitude} = \text{Total Score}$$

The frequency, area impact, and potential damage magnitude values are defined by a scale of numbers from 1 to 5, where 1=low and 5=high.

Vulnerability	Frequency +	Area Impact x	Magnitude =	Total
Coastal Erosion				
Salt Water Intrusion				
Drought				

Notes to facilitators:

- Allow ample time for group discussion and response; and
- Do not drive the process, but facilitate the process. When driving the process, you risk shaping the response and may not be the true reflection of people's thoughts.

4.4 PHASE 3 Assessment of current and future risks

4.4.1 Purpose

The purpose of phase 3 is to ensure that the challenges faced by communities are adequately assessed and should take into consideration past, present and future coping adaptation strategies based on predicted climatic changes.

Task 1 Analysis

Two approaches to analysis are suggested:

- Analyse the challenges faced by the communities using the assistance of facilitators and experts; and
- Further analysis and dialogue to be carried out by the Team with assistance from other relevant experts (if needed).

Analytical sessions provide the communities with the opportunity to self-examine how they have carried out community development programmes, their own practices e.g. deforestation, slash and burn agriculture etc. It also serves to raise awareness level of communities to realise the linkages of their actions and potential consequences. Assessments could include the following; what systems are in place to cope with the effects of changes? Reasons for not being able to cope with past extremes? What do they perceive as important adaptation strategies to increase resilience?

Results can be documented using a simple matrix of problems and related causes and how the people are now coping with the risk e.g.

Vulnerability	Causal Factors	Current Coping Mechanism
Salt Water Inundation		
Coastal Erosion		
Water Deficiency		
Loss of land		

Task 2 Linkages

Findings from the community will need to be linked to the latest projections on climate change as stipulated in the IPCC TAR and regional climate models. In particular, it would be of benefit if future projections on how current climatic attributes affecting communities could impact in the future. This is important to note because adaptation measures could be planned likewise so that future risks are taken into consideration now.

The question that will need to be asked is how will climate change manifest in future as predicted by Global and Regional Climate Models. Will the nature of the risks faced today change or intensifies with future climate change? Linking the findings from the community to future climate change scenarios will assist in the analysis and strengthening of adaptive capacity of communities to current and future climate variabilities and long term climate change.

Take for example, if one of the recurring problems identified by communities is drought. It is affecting their cropping patterns and also their general livelihood. The connectivity issue here is how will drought manifest in future as predicted by the Global and Regional Climate Models (GCMs)? Is there likelihood that the drought will be exacerbated because of projected lack of precipitation or will there be likelihood of more precipitation due to climate change?

4.5 PHASE 4 Development and evaluation of adaptation options

4.5.1 Purpose

The purpose of phase 4 is to develop and evaluate the best possible solutions to be implemented by the communities in order to minimise, reduce or even stop the vulnerabilities identified.

Task 1 Solution development

Develop with communities the solutions to the challenges they have identified. This development is not carried out in isolation but a flow on from the problem analysis that was carried out with the communities under Step 1 and 2.

Task 2 Evaluation

Assess the solutions that had been identified with communities. There are two reasons advocated here on why there is a need to evaluate solutions after the communities have identified them. The first is: to determine the best and most appropriate, practical and cost-effective possible solution to addressing the challenges. The second: is solutions should also be evaluated on the basis whether it had been tried before elsewhere and if so, what lessons could be learned from this experience

Take for example, if water is a problem and water tank is the solution suggested. A point of evaluation is whether water tanks had been installed before as a solution to the water problem. If so, did it solve the water problem completely or not? How were the water tanks distributed individually or communally? Having the benefit of hindsight, how could the problem be solved better using the same water tanks as a solution? These are some important issues that need to be critically looked at when carrying out an evaluation of the solution to the problems identified by the community.

4.6 PHASE 5 Implementation of adaptation initiatives

4.6.1 Purpose

The purpose of phase 5 is to develop programmes or projects that will lead to implementation at pilot sites.

Task 1 Proposal Development

After carrying out all necessary analysis and evaluation, action will need to be undertaken. To systematically carry out implementation of the action already agreed upon, stakeholders and resources will need to be identified. In other

words, clarification will need to be sought on what needs to be done (Action), who does what (Responsible), what is required to effectively carry out the action (Resources and Costs) and schedule of implementation (Time).

Task 2 Mainstreaming

To ensure the sustainability of any development carried out at community level, there are various layers of governing structures that exist and will need to be observed during the CV&A process. Some Pacific island countries do have provincial and district level administrations whilst others do have Island Councils. All of these important governing institutions will need to be involved or be informed of what is happening and be teased into the CV&A process so that they are able to identify with the process and be an active partner in the implementation of any action.

Task 3 Implementation

Action at community level should be carried out by the community with assistance from facilitators.

4.7 PHASE 6 Monitoring

4.7.1 Purpose

The purpose of phase 6 is to ensure that regular monitoring and evaluation by the climate change country teams and SPREP on the progress of actions undertaken at community level.

Task 1 Monitoring

If there is a need to reconsider project design in the course of the project based on valid reasons and circumstances, then due consideration should be taken and solution development and implementation stage revisited.