

Rapid Assessment Report – Community Engagement Component (Component 2)
USP-EU Global Climate Change Alliance (GCCA) Project
Pacific Centre for Environment and Sustainable Development (PACE-SD), University of the South Pacific (USP)

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REPORT SUMMARY

Rapid assessments (using the PACE-SD 2012 manual) were carried out in the six potential sites identified by the National Advisory Committee (NPAC). The potential sites where the rapid assessments were carried out include:

- (1) Manumanu Coastal Village, Central Province
- (2) _____
- (3) _____
- (4) _____
- (5) _____
- (6) _____

The sites identified as the USP-EU GCCA Project demonstration sites and the identified vulnerabilities in the demonstration sites after the rapid assessment are:

- Site (1) Identified vulnerabilities (yet to identify)
- Site (2) Identified vulnerabilities (yet to identify)
- Site (3) Identified vulnerabilities (yet to identify)

Only one short-listed site, the Rapid Assessment (RA) was done. There are five other sites yet to have the RA done before the demonstration sites can be nominated to implement the project. Hence, three demonstration sites with vulnerabilities yet to be identified.

(Note: the “Site (x)” will be replaced by the respective demonstration sites)

INTRODUCTION

The Rapid Assessment was done at Manumanu (S 09°06.768', E 146°53.470'), a Coastal village which is located in the Kairuku-Hiri Electorate/District, Central Province. The village is accessible by both land and sea transport. Due to non-maintenance of the road infrastructure, currently it has deteriorated to the point where it is not accessible, even the four wheel drives (4WD) can't manage to pass through. Now, the people depend entirely on sea transport as a means of travel to towns to do business, schooling, etc. The motorized speed boats/dinghies and dugout canoes are mainly used by this coastal community to travel back and forth, to transport goods and people.

The village is located next to deltas of five large rivers, with the swampy mangrove forest in the background. Another big river flows within the mangroves a few meters away from the village. Although, mangroves act as buffer zone and also protect floods and erosion, there have been sights of clearing done. If the villagers continue to destroy mangrove forest in the background, river flooding to affect the community is inevitable.

People in the community live a more subsistence farming and fishing way of life (livelihood). Most of their gardens are further upstream, and are only accessible by boat/canoe. Whatever is produced from the garden is consumed locally by the community themselves. Fishing activity in the community is more of semi-commercial because of the local buyers that exist in the village. Marine and freshwater products mainly include fish, crabs, shells, prawns and turtles.

Houses are built from semi-corrugated iron roof mixed with local bush materials. Mangrove trees provide strong post to withstand the incoming waves. Also, all houses are built on high post to prevent saltwater inundation and to keep them cool during hot sunny days.

The village has a primary school and United Church as the main Christian denomination in the village. Total population in the village is estimated to be more than two thousand (2,000 plus) people. There is high population density in the community with 10-15 people per hectare, and all houses are built along the coastline.

In terms of governance, the church pastors and local ward councilor make important decisions for the benefit of the community. The village magistrates are also active in the community, although the payment of services provided is not that attractive. The primary school teachers working in the village also provide invaluable advice to the decision making of certain significant issues such as education and health.

After the visitation to the village, it is now deduced that the impacts of climate change and environmental problems is a big issue in this community. The major problems the community is currently experiencing are listed as follows;

- (1) Water scarcity,
- (2) Sea level rise and inundation,
- (3) King tides and coastline erosion,
- (4) Health issues resulting from water-/ vector-borne diseases are common, and
- (4) Logs carried by rivers and incoming waves assists by hitting against posts of houses along the coastline is an immense threat.

METHODOLOGY

The rapid assessment method is as per PACE-SD Rapid Assessment 2012 manual prepared by Mr. Leone Limalevu (*refer to attached*).

RAPID ASSESSMENT FINDINGS

Criteria 1: Current Level of Vulnerability Related to Livelihood Sectors

Rank each sector as per rapid assessment site analyses as 1, 2, 3, 4, or 5.

Ref	Rapid Assessment Site	Water Resources	Health and Sanitation	Food Resources and Food Security	Energy Resources and Energy Security
1	Manumanu	5	5	1	3
2					
3					
4					
5					
6					

Manumanu being a coastal community, the problem of basic necessity of certain common resources is an issue worth mentioning. Firstly, water is a very scarce resource in the community as the RA revealed. The only source of fresh water is from a flowing river, which is about a kilometer away from the village. Accessibility to the site to collect water is only by dugout canoes or boats/dinghies. Since it is a very essential resource where people can not survive without it, everyone take turns in collecting water from the only source daily. Occasionally, big containers are used to fetch water and are carefully stored away in safe places and consumed where necessary such as drinking and cooking.

Health issue is another major concern for the community. There is no health centre/clinic in the village that can cater for the sick, and makes even worse for the people in the community. Water-borne diseases such as diarrhoea, typhoid, cholera and skin diseases mainly for children are common. Due to an absence of a health worker, no correct information gained from the vector-borne disease such as malaria and dengue fever. Due to the lack of a proper health centre, the sick people are always admitted to Port Moresby General Hospital in the capital city.

Most food sources come from the land (subsistence agriculture) and marine. Due to extreme weather conditions such as droughts or continuous rainfall, there is frequent food shortage experienced in the community. Due to such unexpected conditions, the people resort to wild plants for food or depend entirely on the marine food including imported food purchased from the shops/stores in town.

Fuel wood is the main source of energy for cooking, and occasionally kerosene lamp is used for lighting at night. Mangroves are the main target for fuel wood, and new trees are cut down and dried before used for cooking. The people travel long distance to collect firewood. They also collect firewood from the logs transported by the rivers and deposited on the banks. Generator/solar is used by Pastors and teachers for lighting up the house.

Criteria 2: Current Level of Adaptive Capacity Related to Livelihood Sectors

The "Site x" will be replaced by the names of the respective demonstration sites. Rank each sector/criteria as per rapid assessment site analyses as 1, 2, 3, 4, or 5.

Factors	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
(i) Level of income per household (estimated)	K10/day 2					
(ii) Predominant type of economic system either in the agriculture or fisheries sectors	Fisheries 2 Agriculture 1					

Income for the household is less than K100 per week mainly from the sale of fish, prawns or crabs (all marine/freshwater products). Marine products are sold to the local buyers in the village or can be transported to the main markets in town, Port Moresby where they can get good bucks for their catch where demand is high. The fisheries sector is more of a semi-commercial type of economic activity than the agriculture sector (subsistence and for personal consumption).

Criteria 3: Level of Community Need

The "Site x" will be replaced by the names of the respective demonstration sites. Rank each sector/criteria as per rapid assessment site analyses as 1, 2, 3, 4, or 5.

Factors	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
(i) Level of community need related to community commitment to addressing climate-induced related stresses in past community projects	5					

This particular community felt that there is a need to address which is directly affecting their livelihood. Climate change impact is a major problem affecting this coastal community, an urgent action by relevant Government Department/Agency or Organization is needed to remedy the problem at hand. The visitation by the USP EU-GCCA project team to this community to bring awareness and to implement climate change adaptation project is a big welcome to this isolated and most affected community.

Criteria 4: Level of Community Interest

The "Site x" will be replaced by the names of the respective demonstration sites. Rank each sector/criteria as per rapid assessment site analyses as 1, 2, 3, 4, or 5.

Factors	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
(i) Level of interest shown for the proposed project	Very interested 5					

This particular community is very much interested in the project undertaken by USP EU-GCCA through PACE-SD. Regardless of the village being isolated and lack essential Government services such as health care and road infrastructure, they are well organized. This is evident from the short notice given for our visit, but the way they welcomed us was quite astounding. The Primary School students with their Head Teacher/Master, Mr. Glayas Kotauga were well prepared and gave us a good welcome together with the community members' cooperation.

Criteria 5: Feasibility of the Project

The "Site x" will be replaced by the names of the respective demonstration sites. Rank each sector/criteria as per rapid assessment site analyses as 1, 2, 3, 4, or 5.

Factors	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
(i) Approximate cost of funding a livelihood adaptation project related to project funding allocation per site or community	K60,000- K90,000					

Manumanu is one of the worst affected communities which need urgent attention. The coastline is eroding at a very rapid rate from the combination of several factors; king tides, sea level rise and flooding from the rivers. Temporary structures/fences have been erected to prevent huge logs being carried by the waves to hit the house. The people, whose houses are built along the coastline, they are always restless because of the waves carrying huge logs which hits against the post of the houses. Relocation or building of seawall can be able to solve this problem.

Water is a very important resource which is in limited supply in the community. The only source of freshwater is located 2-3 kilometers away separated by huge rivers and only accessible by boats or dugout canoes. Some people have unknowingly diverted the natural course of the river and that leads to the pollution of the only source of drinking water. The people have strongly stated that the river needs to be re-diverted to its natural course, and have made several attempts to seek assistance from the Government Department of Environment & Conservation together with an NGO, but no tangible assistance is forthcoming. Similarly, there are no water tanks to store water for household and communal use. Buying tanks and setting up in the community to store rain water would be one idea to solve the problem of water shortage in the village.

Additional Criteria

Note: These additional criteria are used only in cases where the preceding five criteria are not able to clearly determine the required designated number of vulnerable sites. For example, to choose three sites from a pool of six shortlisted sites, two out of six sites have clearly been identified as highly vulnerable, while the third site out of the remaining four sites is difficult to choose as the point score may be equal. In such a case, Criteria 6 is then used as a decider. If this still cannot determine the third site, then Criteria 7(a) or Criteria 7(b) are used depending on the location of the sites. For the use of Criteria 7, coastal communities are compared only against coastal communities using Criteria 7(a), whilst inland communities get compared only against inland communities as in Criteria 7(b).

Criteria 6: Level of Vulnerability of a Community to the Impacts of Cyclones

The "Site x" will be replaced by the names of the respective demonstration sites. Rank each sector/criteria as per rapid assessment site analyses as 1, 2, 3, 4, or 5.

Factors	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
(1) Categorization of the types of housing structures in the community	5					

This community is highly vulnerable to the impacts of cyclone if one occurs. All houses are built from bush materials and also laying along the coastlines, and if a cyclone strikes the whole community will be greatly affected and lives lost or properties destroyed. None of the houses were built with cement and this pose for added disadvantage if cyclones do strike. During king tides and flooding, the water goes under the houses as they are built on stilts (wooden posts).

Criteria 7(a): Level of Vulnerability of Coastal Communities to Inundation, Storm Surges and Projected Sea Level

The “Site x” will be replaced by the names of the respective demonstration sites. Rank each sector/criteria as per rapid assessment site analyses as 1, 2, 3, 4, or 5.

Factors	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
(1) Foreshore Elevation (Estimation – above normal high tide)	5					
(2) Village Elevation (Estimation – above normal high tide)	5					
(3) Reef System	3					
(4) Mangrove Protection	5					
(5) Average distance of shoreline to nearest first row of houses along the shore (if substrate upon village is located is made of sedimentary materials or sand/coral rubble)	5					
(6) Ease of relocation to higher ground without socio-economic and cultural constraints	4					
Average (rounded to the nearest whole number)	(4.5) 5					

This coastal community is located not far away from the coastline, roughly about two meters and the village elevation is also within the same range (2-3m). The core of the village where large population inhabit is susceptible to inundation, storm surges/king tides and sea level rise. There is a presence of a fringing reef about 1-1.5 kilometers from the shoreline. The soil along the beachfront is not suitable for mangroves to grow, hence the village is not protected and secure from incoming high waves and flooding. Relocation of people to higher grounds is a major constraint, as not enough land is available.

Criteria 7(b): Level of Vulnerability of Inland Communities to Riverbank Erosion, Inundation and Flooding

The "Site x" will be replaced by the names of the respective demonstration sites. Rank each sector/criteria as per rapid assessment site analyses as 1, 2, 3, 4, or 5.

Factors	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6
(1) Foreshore Elevation (Estimation)	5					
(2) Village Elevation (Estimation)	5					
(3) Location on river system (proxy for bank erosion potential)	3					
(4) Average distance of river bank to nearest first row of houses along the river	3					
(5) Drainage	4					
(6) Ease of relocation to higher ground without socio-economic and cultural constraints	4					
Average (rounded to the nearest whole number)	(4.8) 5					

Although this is a coastal community, but because it is being located at the delta of five big rivers and one of them is flowing a few meters away from the rear of the village, flooding to riverbank erosion and inundation is inevitable. There is poor or no proper drainage system done because of the village is sitting on sandy soil. In terms of relocation to higher grounds, it is a major constraint as in 7(a) above.

DEMONSTRATION SITE RECOMMENDATIONS

Criteria 1-5:

The "Site x" will be replaced by the names of the respective demonstration sites. Rank each sector/criteria as per rapid assessment site analyses as 1, 2, 3, 4, or 5.

Identified Demonstration Site	Criteria 1				Criteria 2		Criteria 3	Criteria 4	Criteria 5
	Water Resources	Health and Sanitation	Food Resources and Food Security	Energy Resources and Energy Security	(i) Level of income per household	(ii) Predominant Economic System			
Site 1									
Site 2									
Site 3									

Due to the fact that three final demonstration sites are yet to be identified, not much can be stated here. After three demonstration sites are selected, the table can be completed and further explanation provided.

Explanation of above table – why were these sites selected as demonstration sites with respect to the rapid assessment findings.

Additional Criteria

Identified Demonstration Site	Criteria 6	Criteria 7a					Criteria 7b					
		(1) Foreshore Elevation	(2) Village Elevation	(3) Reef System	(4) Mangrove Protection	(5) Average Shoreline Distance						
Site 1												
Site 2												
Site 3												

Again, due to the three final demonstration sites yet to be identified, not much can be stated here. When three demonstration sites are nominated, the table can be completed and further explanation provided.

Explanation of above table – why were these sites selected as demonstration sites with respect to the rapid assessment findings.

GPS Coordinates for Demonstration Sites

Identified Demonstration Site	GPS Readings	
	Longitude Reading	Latitude Reading
Site 1	Yet to identify	Yet to identify
Site 2	Yet to identify	Yet to identify
Site 3	Yet to identify	Yet to identify

CONCLUSION

After the rapid assessments of the six potential sites the three sites selected as demonstration sites are:

- (i) Yet to identify
- (ii) Yet to identify
- (iii) Yet to identify

The vulnerabilities identified in the demonstration sites include:

- Demonstration Site 1 Yet to identify
- Demonstration Site 2 Yet to identify
- Demonstration Site 3 Yet to identify

(Note: the "Demonstration Site x" is to be replaced by the respective site name.)

ATTACHMENT

PACE-SD
V&A Rapid
Assessment
Tool

2012

SITE SELECTION PROCESS AND CRITERIA

Developed by Leone Limalevu (PACE-SD Fellow)

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1.0 Introduction

The selection and prioritisation of project sites for climate change adaptation initiatives foremost depends on the objective of the project. The objective can determine how communities are selected to participate in the project. For projects focused on assisting rural communities to adapt to current and projected future climate change, there are basically three main components, as follows:

- a. Research;
- b. Adaptation of highly vulnerable communities; and
- c. Adaptation of representative vulnerable communities.

For the PACE-SD methodology, the primary focus is on the latest component. The main rationale for this is to be inclusive and therefore ensure future uptake by entire communities, as climate change impacts will be felt by all communities, though at different levels of severity and within different timeframes.

1.1 The PACE-SD Site Selection Approach

This site selection process and criteria, as a core component of the PACE-SD methodology, provides suggestions for the European Union Global Climate Change Alliance (EU-GCCA) in-country coordinators to consider in selecting their project sites. The assessment approach could be based on the following key factors, to be determined and agreed to by GCCA Project Management Team and the National Project Advisory Committee in each of the countries, categorised in relative terms:

- Level of vulnerability of the community;
- Level of adaptive capacity of the community;
- Level of need of the community;
- Level of interest of the community; and
- Feasibility of the project to adequately address the identified level of vulnerability within the funding capacity of the project.

Additional criteria can include:

- Level of vulnerability of the community to cyclones; and
- Level of vulnerability of the community to flooding, storm surges and/or projected sea level rise for coastal communities.

2.0 Methodology

2.1 Gathering Information and Short-listing Sites

The relevant stakeholders, namely the Provincial Offices, the Department of Environment, the Water Authority, and the Health Department are to be contacted to provide list of potential sites. It is important that the letter sent to these agencies be carefully drafted so that the response would be relevant to the information that is required for screening and selection of sites. From the number of sites submitted (for example 20 or more sites), the information gathered from correspondences with district and provincial offices plus from established networks can be used by the National Project Advisory Committee to screen the sites down to ten sites. Following on from this, the rapid assessment, based on the following criteria, is to be used to select the most vulnerable final three to six sites.

2.2 Field Visits

The PACE-SD Rapid Assessment is used to gather information from the short-listed communities (see Annex 1). It should take three to five hours at each site to undertake this assessment. Acquisition of data and information is through a number of key informant interviews (such as community leaders), discussions at informal village meetings and via rapid appraisal of the physical and built environment. The scores for each site are then decided on collectively by the people involved in the site assessment.

2.3 Site Assessment Method: Point Score System

A total score of one to five is made for each criterion, by taking the average and rounding it off to the nearest whole number. It is important to note that when tallying up the points, the vulnerability score ranges from one ('very low vulnerability') to five ('very high vulnerability'). The table below indicates the key to be used. The opposite applies when assessing adaptive capacity. That is, the highest adaptive capacity (five) indicates the lowest vulnerability, while the lowest adaptive capacity (one) is the most vulnerable. Therefore vulnerability scale is judged on the highest score to determine the most vulnerable, while the adaptive capacity scale is judged on the lowest score to determine the most vulnerable.

Description	Very low vulnerability	Low vulnerability	Moderate vulnerability	High vulnerability	Very high vulnerability
Value	1	2	3	4	5

3.0 Site Selection Criteria

Criteria 1: Current Level of Vulnerability Related to Livelihood Sectors

The assessment of this criterion needs to be conducted in a more objective and systematic way based on the factors relating to community vulnerability. This assessment is focused on the impacts of climate change on three climate-sensitive livelihood sectors. The sectors include: (i) water resources; (ii) health and sanitation; and (iii) food resources and food security. The points scale system to be used for each of the livelihood sectors is as follows: 1 = very low vulnerability; 2 = low vulnerability; 3 = moderate vulnerability; 4 = high vulnerability; and 5 = very high vulnerability.

(1) Water Resources

Factors	Point System	Points
(i) Estimated rain-months per year that occur in the area	9 - 12 months: 1 6 - <9 months: 2 3 - <6 months: 3 1 - <3 months: 4 Less than 1 month: 5	
(ii) Presence of water sources	Flowing river/s: 1 Stream/s: 2 Medium to large spring/s: 3 Small spring/s: 4 Well/s: 5	
(iii) Discharge rates of springs (To be measured preferably during the dry month or season)	1.5 L/second and above: 1 1.0 - < 1.5 L/second: 2 0.5 - < 1.0 L/second: 3 0.25 - < 0.5 L/second: 4 < 0.25 L/second: 5	

Notes:

- (i) If the community has wells as well as small springs, the point score would be 4.
- (ii) Community relying solely on a bore-hole as a source of water receives a point score of 5.
- (iii) The discharge rates can be calculated using improvised materials, if proper measuring cylinder and stop watches are not available. The use of a wrist watch for clocking the time and any container with known volume is adequate for calculating an estimated discharge rate of a spring.

(2) Health and Sanitation

(a) Level of incidence of vector-borne diseases occurring in the community

Factors	Point System	Points
(i) Dengue (number of cases per year)	None:	1
	1 - 3:	2
	4 - 7:	3
	8 - 10:	4
	>10:	5
(ii) Malaria (number of cases per year)	None:	1
	1 - 3:	2
	4 - 7:	3
	8 - 10:	4
	>10:	5

Notes:

(i) The point system needs to be adjusted to reflect the level of occurrences of vector and water borne diseases occurring in the study areas. For example, if occurrences range between 8 to 30 in the communities, the scale of the point system should be adjusted to cater for the high incidences.

(ii) To decide on the higher level of vulnerability between two sites if their point scores are in the same range, e.g. 8 - 10 scale, then the actual number of incidence should be the decider.

(b) Level of incidence of water-borne diseases occurring in the community.

Factors	Point System	Points
(i) Diarrhoea (number of cases per year)	None:	1
	1 - 3:	2
	4 - 7:	3
	8 - 10:	4
	>10:	5
(ii) Skin diseases (number of cases per year)	None:	1
	1 - 3:	2
	4 - 7:	3
	8 - 10:	4
	>10:	5
(iii) Typhoid	None:	1
	1 - 3:	2
	4 - 7:	3
	8 - 10:	4
	>10:	5
(iv) Cholera	None:	1
	1 - 3:	2
	4 - 7:	3
	8 - 10:	4
	>10:	5

(3) Food Resources and Food Security

Factors	Point System	Points
(i) Basic subsistence sources of food	Derive 100% of food needs from both land and marine-based food resources: 1 Derive less than 75% of food needs from both land and marine resources: 2 Derive less than 50% of food needs from both land and marine resources: 3 Derive less than 25% of food needs from both land and marine resources: 4 Derive less than 25% of food needs from either land or marine resources: 5	
(ii) Total land area per person	≥7 hectare/per person: 1 5 - <7 hectare/per person: 2 3 - <5 hectare/per person: 3 1 - <3 hectare/per person: 4 <1 hectare/per person: 5	
(iii) Relative soil fertility	Highly fertile soils: 1 Fertile soils: 2 Moderate fertility: 3 Low fertility or degraded soils: 4 Poor or highly degraded soils: 5	
(iv) Relative productivity of marine resources	Highly productive marine resource: 1 Productive marine resource: 2 Moderately productive: 3 Low productive or degraded resource: 4 Poor or highly degraded resource: 5	

(4) Energy Resources and Energy Security

Factors	Point System	Points
(i) Basic energy sources for lighting	Multiple sources, including solar: 1 Connected to a main power grid: 2 Electrical generator: 3 Kerosene lamp: 4 Candle, fuel wood or others: 5	
(ii) Basic energy sources for cooking	Multiple sources, including electric: 1 Fuel wood, kerosene and gas: 2 Fuel wood and either kerosene or gas: 3 Solely kerosene: 4 Solely fuel wood: 5	

Criteria 2: Current Level of Adaptive Capacity Related to Livelihood Sectors

This criterion is mainly based on the approximate aggregate income of the community per year. This amount is then divided according to the number of households to calculate the income per household per year, and then further calculated to a daily basis. The points system to be used equivalent in actual weekly earnings is as follows: 1 = income per household is below poverty line; 2 = poverty line; 3 = marginally above poverty line; 4 = income that adequately meets the basic family needs; and 5 = earning disposable income. According to the United Nations definition of poverty, people well below the poverty line are earning less than US\$1 per day. Each of the in-country coordinators needs to check their own country-specific definition of poverty. If the level of income is difficult to derive, then the type of economic system, such as agriculture system or fisheries could be used. The point system to be used is: 1 = purely subsistence; 2 = semi-subsistence; 3 = semi-commercial; 4 = commercial; 5 = highly commercial.

Factors	Point System	Points
(i) Level of income per household (estimated)	≤\$50 per week: 1 \$51 - \$100 per week: 2 \$101 - \$200 per week: 3 \$201 - \$300 per week: 4 >\$300 per week: 5	
(ii) Predominant type of economic system either in the agriculture or fisheries sectors	Predominantly subsistence: 1 Subsistence to semi-commercial: 2 Semi-commercial: 3 Commercial: 4 Highly commercial: 5	

Criteria 3: Level of Community Need

This criterion is related to the level of commitment the community has shown related to past projects addressing key livelihood sectors that are climate sensitive. The point system related to this criterion is as follows: 1 = climate change related impacts not an issue; 2 = entirely externally-driven projects; 3 = externally-driven projects with some contribution from the community; 4 = externally driven projects with equal level of contribution from the community; and 5 = community had embarked on project/s which tried to address impacts of climate change on their own.

Factors	Point System	Points
(i) Level of community need related to community commitment to addressing climate-induced related stresses in past community projects	Climate change related stresses not an issue: 1 Entirely externally-driven projects: 2 Externally-driven projects but with some contributions from the community: 3 Externally-driven projects with equal contributions from the community: 4 Entirely community-driven projects: 5	

Criteria 4: Level of Community Interest

The points system related to this criterion relating to community interest is: 1 = not interested; 2 = moderately interested but has reservations; 3 = moderately interested; 4 = interested; and 5 = very interested.

Factors	Point System	Points
(i) Level of interest shown for the proposed project	Not interested: 1 Moderately interested but have reservations: 2 Moderately interested: 3 Interested: 4 Very interested: 5	

Criteria 5: Feasibility of the Project

The fifth criterion involves assessing the relative feasibility of the project. The points system for this criterion is as follows: 1 = not feasible; 2 = low feasibility; 3 = moderately feasible; 4 = feasible; 5 = highly feasible. To consider, the funding level of the Fiji climate change adaptation projects was approximately F\$30,000-\$40,000 per site or approximately US\$20,000-\$30,000 per site. To evaluate the project feasibility in implementing adaptation projects related to livelihood sectors, this criterion is simply best determined by the population size. If you intend to work in a site that requires greater funding than that allocated by the project, then you need to be very skillful in sourcing additional funds from relevant stakeholders or other funding agencies including the national government. In this regard, adaptation measures such as coastal protection works, planned relocation, and major infrastructural developments such as construction of flood gates are best left with national governments to address.

Factors	Point System (In Fijian (F) dollars)	Points
(i) Approximate cost of funding a livelihood adaptation project related to project funding allocation per site or community	≥F\$100,000 (i.e. approx. >US\$50,000):	1
	F\$80,000 - F\$99,000:	2
	F\$60,000 - F\$79,000:	3
	F\$40,000 - F\$59,000:	4
	<F\$40,000 (i.e. approx. <US\$20,000):	5

Note: this criterion is only applicable if the amount of funding allocated per site or community is between F\$30,000 and F\$80,000.

4.0 Additional Criteria

The following two criteria (or whichever is applicable) are only applied to decide for sites that are equal in their points tally:

- Criteria 6: Vulnerability of the community to cyclones; and
- Criteria 7: Vulnerability of the community to flooding and or storm surges and projected sea level rise for communities located in flood prone or coastal areas.

It is important to note that Pacific Island countries that are located near the equator are not directly affected by cyclones, while inundation from king tides and storm surges may be the main hazards.

Note: These additional criteria are used only in cases where the preceding five criteria are not able to clearly determine the required designated number of vulnerable sites. For example, to choose three sites from a pool of six shortlisted sites, when two out of six sites have clearly been identified as highly vulnerable, while the third site out of the remaining four sites is difficult to choose as the point score may be equal. In such a case, Criteria 6 is then used as a decider. If this still cannot determine the third site, then Criteria 7(a) or Criteria 7(b) are used depending on the location of the sites. For the use of Criteria 7, coastal communities are compared only against coastal communities using Criteria 7(a), whilst inland communities get compared only against inland communities as in Criteria 7(b).

Criteria 6: Level of Vulnerability of a Community to the Impacts of Cyclones

Factors	Point System	Points
(1) Categorisation of the types of housing structures in the community	≥80% are of modern cement or properly constructed wooden houses:	1
	≥60 - <80% are of modern cement or properly constructed wooden houses:	2
	≥40 - <60% are of modern cement or properly constructed wooden houses:	3
	≥20 - <40 % are of modern cement or properly constructed wooden houses:	4
	≤20% are of modern cement or properly constructed wooden houses:	5

Criteria 7a: Level of Vulnerability of Coastal Communities to Inundation, Storm surges and Projected Sea Level

Factors	Point System	Points
(1) Foreshore Elevation (Estimation – above normal high tide)	>9m: 1 7 - <9m: 2 5 - <7m: 3 3 - <5m: 4 <3m: 5	
(2) Village Elevation (Estimation – above normal high tide)	>50%(>9m): 1 >50%(7 - <9m): 2 >50%(5 - <7m): 3 >50%(3 - <5m): 4 >50%(<3m): 5	
(3) Reef System	Presence of fringing and barrier reefs: 1 Presence of barrier reef only: 2 Presence of fringing reef only: 3 Reefs are disconnected or isolated: 4 Presence of open passages to shore or no barrier and no fringing reefs: 5	
(4) Mangrove Protection	Heavily Dense: 1 Moderately Dense: 2 Dense: 3 Scattered: 4 None or isolated stands: 5	
(5) Average distance of shoreline to nearest first row of houses along the shore (if substrate upon village is located is made of sedimentary materials or sandy/coral rubble)	> 20m: 1 15 - < 20m: 2 10 - < 15m: 3 5 - < 10m: 4 1 - < 5m: 5	
(6) Ease of relocation to higher ground without socio-economic and cultural constraints	Easily: 1 Limiting factor is only finance: 2 Some geographical constraints: 3 Major constraints: 4 No land to relocate to at all: 5	
Average Points (rounded to the nearest whole number):		

Criteria 7b: Level of Vulnerability of Inland Communities to Riverbank Erosion, Inundation and Flooding

Factors	Point System	Points
(1) Foreshore Elevation (Estimation)	>9m: 1 7 - <9m: 2 5 - <7m: 3 3 - <5m: 4 1 - <3m: 5	
(2) Village elevation (Estimation)	>50%(>9m): 1 >50%(7 - <9m): 2 >50%(5 - <7m): 3 >50%(3 - <5m): 4 >50%(1 - <3m): 5	
(3) Location on river system (proxy for bank erosion potential)	Convex: 1 Moderately Convex: 2 Straight: 3 Moderately Concave: 4 Concave: 5	
(4) Average distance of river bank to nearest first row of houses along the river	> 9m: 1 7 - < 9m: 2 5 - < 7m: 3 3 - < 5m: 4 1 - < 3m: 5	
(5) Drainage	Good: 1 Moderate to Good: 2 Moderate: 3 Poor to Moderate: 4 Poor: 5	
(6) Ease of relocation to higher ground without socio-economic and cultural constraints	Easily: 1 Limiting factor is only finance: 2 Some geographical constraints: 3 Major constraints: 4 No land to relocate to at all: 5	
Average Points (rounded to the nearest whole number):		

Annex 1

PACE-SD Rapid V&A Assessment Tool [Questionnaire]

For Prioritisation and Selection of Sites

[Updated on 6th July 2012]
[Ref. L. Limalevu, Fellow (PACE-SD), USP]

Note: (i) This is a rapid V&A Assessment used to screen and select which communities are vulnerable to the current and projected impacts of climate change and therefore should be prioritised for adaptation projects.

(ii) The information gathered for the assessment is mainly from interviews of key informants or community representatives.

(iii) The assessment should take approximately one day per community to complete, depending on the weather condition and availability of community representatives as key informants for the interview.

(iv) The PACE-SD Rapid Assessment points scoring system is then used to assess the relative vulnerability and adaptive capacity of the community to the impacts of climate change.

A. Introduction

- Visit the community/village according to the proper cultural protocol, for example, in Fiji, the presentation of the 'sevusevu' is the norm
- Brief the community elders or representative/s on the purpose of the visit
- Provide a briefing on the rapid assessment approach (i.e. key informant interviews, followed by observations from a brief tour around the village and surrounding environment)
- Briefing on how the survey findings and procedure for determining the selection of the project sites
- Note: the team should ensure not to raise any expectations of the community; therefore their approach should be honest and 'straight to the point'

B. Physiographic Characteristics - Visual Observation (site and surrounding areas)

- Geomorphology
- Drainage Patterns
- Vegetation cover
- Land use types and pattern
- Note: you need to have background information at hand from your literature search and information networks (if available) to support your visual observations on the site and surrounding environment

C. Interview of Key Informants

- This should take 1 hour to a maximum of 3 hours
- The key persons that should comprise the key informants for the interview should be the community representative/s, a village nurse or community health worker, a representative from the village development committee (if there is one such committee) and a representative from the women's committee

1.0 Basic Socio-economic Information

1.1 What is the population and population distribution (total number, approximate gender distribution)?

1.2 What is the community management (governance) structure?

1.3 What is the total land area owned by the community?

1.4 What is the approximate proportion of flat 'arable' land to hilly/mountainous land or degraded (e.g. through salt-water intrusion)?

- 1.5 What are the main sources of income?
- 1.6 What is the main farming system practised by the community (i.e. subsistence, subsistence/semi-commercial, semi-commercial, semi-commercial/commercial, entirely commercial)?
- 1.7 What is the main fisheries system practised by the community (i.e. subsistence, subsistence/semi-commercial, semi-commercial, semi-commercial/commercial, entirely commercial)?
- 1.8 What is the aggregated weekly/monthly/annual income of the community derived from sale of natural resources?
- 1.9 Are there any paid employees/workers residing in the community? If so, what is the aggregate weekly/monthly/annual income of these workers?
- 1.10 Are there any village development plans?
- 1.11 What were the types of development projects implemented in the last 30 years?
- 1.12 Are there any natural resources development plans?
- 1.13 What were the types of natural resources management projects implemented in the last 30 years?
- 1.14 Are there any community investment/business plans?
- 1.15 What were the types of investment/business projects implemented in the last 30 years?
- 1.16 Has a climate change adaptation project been implemented previously by the community?

2.0 Water Resources and Supply

- 2.1 What is or are currently the most prominent source/s of water (well, spring, borehole, rainwater, stream, etc)?
- 2.2 What is the water availability throughout the year (i.e. annual rainfall distribution – number of dry months per year)?
- 2.3 What is or are the relative water quality of the most prominent source/s?
- 2.4 What is the current water distribution system?
- 2.5 What are the types and capacities of water storages dedicated for the whole community?
- 2.6 What are the types and capacities of water storages at the household level?

3.0 Health and Sanitation

- 3.1 What is the availability or presence of health services facilities?
- 3.2 How far is the nearest health centre?
- 3.3 What range of services does the nearest health centre provide?
- 3.4 What is the incidence of water borne diseases (diarrhoea, skin diseases, leptospirosis, etc)?
- 3.5 What is the incidence of vector borne diseases (dengue, malaria, etc)?
- 3.6 Are there any other diseases prevalent in the community?
- 3.7 Obtain a health report and health data from village nurse or health worker (note: treat with utmost confidence)
- 3.8 Is there a health committee? If so, are there any planned activities?
- 3.9 Record planned health committee or community health-related activities
- 3.10 If possible, you need to confirm the response to 3.2, 3.3 and 3.4 from the nearest district health centre (note: treat with utmost confidence)

4.0 Food Resources and Food Security

- 4.1 What is the total land availability (approximate total size/area of farming land for the community)?
- 4.2 List, according to importance, types of food sources: (i) root crops; (ii) vegetables; and (iii) trees crops
- 4.4 What are the relative productivity levels of the following: (i) root crops; (ii) vegetables; and (iii) tree crops?
- 4.5 What is the estimated area of fishing ground owned by the community?
- 4.5 List, according to importance, the main fish types as food sources
- 4.6 List, according to importance, the main non-fin fish types as food sources (e.g. crabs, prawns, octopus, etc)
- 4.7 What is the relative productivity level of fin-fish resources?

4.8 What is the relative productivity level of non-fin fish resources?

5.0 Energy Sources

5.1 List the key energy sources for cooking and priorities list (e.g. fuel wood, kerosene, gas, electricity)

5.2 List the key energy sources for lighting (e.g. kerosene, diesel generators, solar, electricity from mini hydro dam, electricity from main grid)

6.0 Disaster Risk Management (DRM)

Note: Limit DRM to climate-induced disasters, e.g. cyclones, droughts, floods, and cyclone-induced high waves or storm surges

6.1 Categorise the types of infrastructures in the community (i.e. % of traditional, lean-to (i.e. corrugated iron walls and roofing), wooden, wooden with cement base, cement/block house)

6.2 Is there a disaster management plan?

6.3 If there is one, how effective is the plan?

6.4 Is there an evacuation centre (inspect the status and condition of the evacuation centre)?

7.0 Community Needs Assessment

7.1 List the number of projects currently being implemented by the community by themselves and those through external assistance

7.3 Gauge their willingness to participate in the EU-GCCA project if their community gets selected?

7.3 What level of in-kind contribution would they be willing to provide for the project (e.g. labour, meals for the workers, etc)?

7.4 What level of cash contribution would they be willing to provide for the project?

D. Field Assessment

➤ This should take 1-3 hours

➤ The team will take a brief tour around the village and its surroundings making observations and verifying issues that are related to the questions asked during the interview

E. Concluding Remarks

➤ The team spokesperson would then make some concluding comments and then reiterate how the findings would then be used for the final selection process

➤ The team then thank the community representatives for their time and then an official request to leave is performed, e.g. for Fiji an 'itatau' is presented