

How can climate change be considered in Vulnerability and Capacity Assessments?

A summary for practitioners – March 2012

Why this document?

The aim of this document is to provide inspiration for practitioners to consider and address the issue of climate change within their work with communities.¹ This document assumes that the practitioner understands and utilises the International Federation's Vulnerability and Capacity Assessment (VCA) toolbox.²

This document is divided into three sections, firstly an introduction to the topic, secondly, some step-by-step guidance for aspects to consider before, during and after the VCA process, and lastly a section on 'things to keep in mind'. Please pick and choose which parts from this document are relevant to you and adapt them to use in your local context, including the use of locally appropriate terms.

1. Introducing climate change into VCAs

Start where you feel comfortable

Taking on board all of the ideas and suggestions provided below might be too much to start with so start where you feel comfortable. First, you might want to improve your own understanding of climate change as a facilitator, next, you might want to ask questions of communities to gather information that can be used to make decisions about dealing with changes that are taking place, and as you grow more confident you might start to bring knowledge of climate change to communities.

Why does climate change need to be considered in VCAs?

According to climate scientists, weather extremes that already affect communities are likely to occur more often and be more severe in the coming decades. Weather-related disasters doubled in the past 20 years alone. This disrupts community health, livelihoods and education as well as causes obvious damage to infrastructure such as roads and homes. In addition to this, more gradual changes to temperature, sea level, rainfall and seasons over time can affect agriculture and water availability/quality etc. Now we need not only to take action based on our past experiences, but also plan for a more severe and uncertain future.

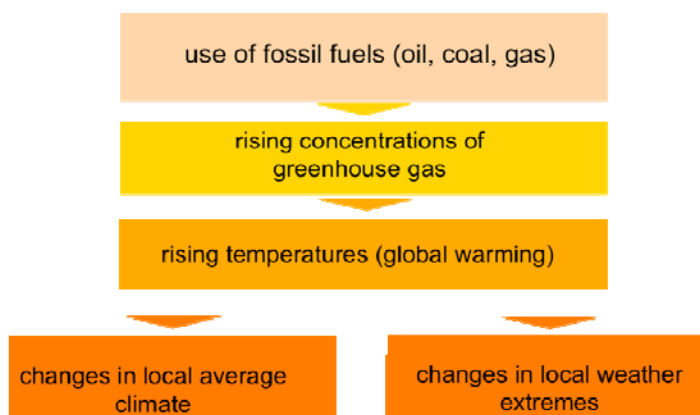
Climate change might already be familiar to communities. Communities in many parts of the world are already noticing changes to climate and weather patterns or 'funny weather' relating to temperature and rainfall (particularly people who depend on climate-related sources of income such as agriculture). In many cases the observed new weather patterns is challenging traditional knowledge. Talking to communities about these changes provides people with an opportunity to come up with strategies to deal with them, and incorporate the ideas into their "risk reduction plans" developed through the VCA process.

¹ This document builds upon guidance first provided in the 'Community Risk Reduction' section of the Red Cross Red Crescent Climate Guide available at: <http://www.climatecentre.org/site/publications/85>.

² www.ifrc.org/what/disasters/resources/publications.asp

Origins and effects of global warming

For a summary of the science of climate change please refer to the Red Cross/Red Crescent Climate Guide chapter '*Climate change: the basics*' available at: (<http://www.climatecentre.org/site/publications/85>). The process of climate change is demonstrated below.



So note that there is a change in *average* conditions (trends) as well as *extremes* (more frequent, more severe: new and more surprises) – including a change in seasonal and geographical distribution of hazards.

2. Steps for considering climate change before, during and after a VCA

2.1 Planning the VCA

First you need to check what is already known about the current climate and any possible changes; so:

- Check if your National Society has worked on a climate change background document as part of the 'Preparedness for Climate Change' programme (over 60 countries had participated by the end of 2011) – this may contain useful information.
- Find out if someone in your National Society is in contact with the national meteorological office and/or environment department. If not, you could make an effort to establish the relevant collaboration.
- These offices will be able to provide an overview of historical changes (eg. rainfall patterns for a given town) that are already occurring, plus projected climate for the coming decades (eg. increasing drought for a given country). This might take the form of 'National Communications'³. The historical trends information could be available for specific locations. However it is important to note that projections for the future are *not available accurately at local scale* (downscaled models don't agree with each other) and therefore can't be used for guiding site selection or to help identify site-specific adaptation measures to include in community risk reduction plans resulting from the VCA process.

Information collected at this stage may provide good guidance on what questions to ask communities. If for example changes in rainfall patterns are evident, then having a discussion with communities on how this might impact their lives now and into the future could assist in developing longer-term strategies to deal with it.

³ National Communications to the UNFCCC (see: http://unfccc.int/national_reports/non-annex_i_natcom/items/2979.php for a list)

Knowing what is changing and likely to get worse may even be a way of choosing which parts of the country to focus your efforts. You may even be able to get someone with knowledge of climate change to give you and other VCA facilitators a briefing. You will find a general Red Cross/Red Crescent basic climate change presentation at: <http://www.climatecentre.org/site/presentations>

Note: If you need climate information explained in a way that makes it relevant to your work and in less scientific or technical language, or if you have difficulty understanding the information you are given, you can send it to the IFRC climate helpdesk and ask their assistance at: ifrc@iri.columbia.edu.

2.2 Consider climate change in VCA tools

You can usually address locally experienced changes in weather without necessarily introducing and using the term or concept of “climate change” which can, in some cases, cause some confusion (see further below).

Some common VCA tools and how they can be used to consider changes that are taking place	
VCA tool	What we can do differently
Review of secondary sources VCA Toolbox RRS1, p. 48-53	This aspect is largely covered in section 2.1 above, so If you have consulted relevant climate-related information sources as described, you have already started adjusting the approach. In addition, there may be a need to re-visit the issue during the analysis step after the mani VCA sessions in order to verify observations and information from the communities (see 2.4 below).
Semi-structured interviews VCA Toolbox RRS 3, p. 60-65	<p>It is important to interview a range of key informants such as police, health workers, fisherfolk, traders etc. For example they may know if anything ‘unusual’ is going on in relation to disaster events, agricultural production and health. Think about how women and men might be affected differently, and may have insight into changes in different ways, and consider including people from a diverse range of livelihoods and roles within the community.</p> <p>Consider using special questions to get a picture of what is occurring (see Annex 1 for examples).</p> <p>As in all VCA, it is usually more effective to ask indirect (open) questions, rather than direct (closed) ones to stimulate discussion and be able to get a picture of what is affecting a community. For example asking a community whether they know if the “climate is changing” might be unfamiliar to them. But asking them about their agricultural practises and traditional knowledge and how the present situation and patterns compares to the past might help reveal useful information about changes in seasons. It can also be useful to use other tools in conjunction with interview questions (such as observation and secondary data) to confirm or adjust the assumptions that you are making.</p>
Focus group discussion RRS 4, VCA Toolbox p. 66-70	Consider gathering the elders – gender-separated if appropriate and needed – of the community to have a general discussion about changes over time, or integrate these questions into usual focal group discussion topics such as livelihoods or health. You could ask children or youth in the community to

⁴ Children, adolescents and young adults are going to experience the most change out of anyone in the community during their lifetimes. It is important that you gather not only information from them but

	interview the elders ⁴ – that way they learn about it at the same time. Have discussions with both male and female elders, they may hold different types of knowledge, including traditional knowledge such as weather prediction techniques.
Direct Observation RRS 5, VCA Toolbox p. 71-74	<p>Think of the information you have gathered in from external sources on changes in climate and also interviews you have had with elders. Are there any obvious signs that changes are taking place? Can the elders or other key informants point out changes that have occurred over time if they aren't obvious? (e.g. land by the sea may have eroded away, new, higher flood levels, different crops being eaten or sold, etc.). Remember: changes in general are good to note, you can have a discussion once all information is gathered as to whether the changes may be attributable to climate change or not (see Annex 4).</p> <p>Prior to meeting with community members, you could gather observations and note questions you might want to ask such as danger zones, places of environmental degradation or erosion etc.</p>
Risk Map RRS 6, VCA Toolbox p. 75-85	<p>While developing the map(s), ask people to describe not only the current situation but also how it may be changing. Ask for specific measurements (i.e. what level hazards such as floods come to and at what time of the year? Have these changed over time?).</p> <p>Try to ensure that the map includes features of major environmental changes such as deforested zones, flood plains, erosion etc. It will be necessary to assess whether changes you are observing are related to climate change versus which may be related to other factors such as deforestation, over-extraction of groundwater etc. In addition, some environmental changes may exacerbate the risks associated with more extreme weather events (for example, increasingly heavy rain (with climate change) on a mountain slope increases risk of landslides, but it is even more of an extreme risk if the slope is also deforested). Simple examples of what to look for include:</p> <ul style="list-style-type: none"> • deforested slopes (locally): increasing risk of landslide • deforested slopes (upstream): increasing risk of flash flood downstream • Encroached wetland: increasing risk of flooding. <p>To aid discussion of this you might find it useful to create a map from a local watershed (runoff area) perspective rather than just within the immediate community. See Annex 4 for further guidance on this analysis.</p> <p>Based on the information you gathered when planning the VCA (step 2.1 above), you could use a baseline map to indicate places where changes are likely to take place in the future e.g. higher sea levels. This would indicate which locations are most vulnerable. (See example map from Indonesian Red Cross in Annex 2).</p>
Transect Walk RRS 7, VCA Toolbox p. 86-91	Conduct the transect walk early on in the community visit. Make observations of possible hazards that might be aggravated by changing weather patterns and note questions you might want to ask community such as danger zones, erosion etc. You could also undertake the transect walk again during community discussions.

also ensure that they participate both in discussions about change and the chosen strategies to deal with it.

<p>Seasonal Calendar</p> <p>RRS8, VCA Toolbox p. 92-97</p>	<p>The seasonal calendar opens up an opportunity for VCA facilitators to discuss whether seasons are changing⁵ which may have implications for health problems, disasters and livelihoods (see example questions in Annex 1 & Annex 2 diagram). It is recommended that first you create a seasonal calendar based on 'now' and after the community has completed that task, ask if these seasons have changed compared to the past 30 years or so. However, if people are already mentioning unpredictable weather, you might revert the order and discuss what it was like in the past and then try to discuss potential challenges induced by any recent 'unpredictability'. For discussing long-term variation (see also 'Historical profile') it is important to include elders in the group. Remember also, it is not one past event, but patterns in the past that you are looking for in the seasonal calendar.</p> <p>The tool can be used to raise awareness that in light of changes to weather patterns, old seasonal calendars and traditional planning approaches may need to be reassessed. A diagram could be used to indicate how things like flowering, planting and harvest times of crops are changing, new weather and health related hazards might be emerging or old ones might be appearing at times of the year not expected.</p>
<p>Historical Profile/Historical calendar</p> <p>RRS 9, VCA Toolbox p. 98-105</p>	<p>List major extreme events. Have weather & climate related events such as flood, drought and cyclones changed in frequency or severity? What about health problems? Have there been new emerging ones (vector- or water-borne, which could potentially be affected by changes in climate)? Observations from the community can be cross-compared with trends measured by meteorological and disaster management offices.</p> <p>Memory bias is a potential challenge here, so it is important to triangulate information and try to ask clarifying questions to help avoid misinterpret apparent drastic changes.</p>
<p>Livelihood analysis</p> <p>RRS 11, VCA Toolbox p. 109-118</p>	<p>Consider which livelihoods could be most at risk to the hazards associated with climate change in rural and urban areas. For example: small land holder and traditional farming, fishing, small market trading in shanty towns or slum areas.</p> <p>If possible, determine the different livelihood groups in the areas that are most at risk. List what makes them at risk. This could be done with assistance from planning authorities, community group leaders etc</p> <p>You could cross check the information given about livelihoods with the changes and major climate risks – eg. If they are highly agriculturally dependent and rainfall is decreasing over time, gradual temperature increases and extremes, or seasons are shifting, this could be an emerging issue.</p>
<p>Institutional and social network analysis</p> <p>RRS 12, VCA Toolbox p. 119 – 121</p>	<p>This tool can reveal where the community currently receives its information from (and trusts), or identify available but underutilised opportunities and resources, e.g. weather forecasts for early warning.</p> <p>Identify local trustworthy partners that could assist communities, e.g. farmers' technical colleges or government agricultural extension services that could help introduce drought/flood resistant agricultural practises and strategies.</p>

⁵ A note on use of language: it has been the experience of some National Societies that use of the term 'in the past' is very ambiguous – that is, it can be interpreted in many ways. Be clear on what you are trying to communicate and try to translate into local languages.

2.3 Analyse the community information

You have used your choice of relevant VCA tools and now you are gathering all of the data and looking at the 'bigger picture' of what is happening to the community, the 'wall method' (VCA Toolbox p. 143-149; MRS3) is commonly used for this. Combine the information from interviews, historical profiles, mapping, seasonal calendar etc and make an overall judgement: what are currently the main hazards? Is the climate changing in this community? How could a changing climate influence their current hazards? In what ways are they going to be most vulnerable to climate change? There are also some questions you could consider asking during this analysis in Annex 1.

Think about these changes when you are making a summary of risks that the community faces. See Annex 4 for a simple table template that might help when you are making preparations to discuss changes with the community. Use the table to list changes that may be occurring. Remember there may be many contributing factors, not just climate change.

2.4 Verifying community information by checking secondary information

You could take a look at the information gathered on climate change in your country/area during Step 2.1. Does this information match up with what the community based information is telling you? If they do match up, you could show communities what is happening to other parts of the country so that they are aware that what is happening to them is also happening to others. If they don't match up, perhaps the changes are occurring because of factors other than climate change and this is worth investigating and acting upon also. The community might also not yet be aware of subtle changes taking place. If climate change is not an issue, don't force it to be one. Building a community's overall resilience will assist in dealing with future threats posed by climate change and can be a 'no regrets' approach.

2.5 Discuss changes with the community

The summary you have come up with in Step 2.3 is useful when you discuss information gathered during the VCA process with a community. It could also be used when the community start to develop solutions to the problems faced. How do they currently cope with the problems? If these problems worsen over time, how is this likely to affect the community? What could be done to prevent the problem getting worse? The aim is for communities to understand that the risks are changing and that they can take action to reduce the risks they face. It is generally recommended that the new concept of climate change NOT be introduced *before* the VCA process as there is a likelihood that it will be over-emphasised by community members during the use of the VCA tools.

2.6 Developing risk reduction plans

When the community is drafting their '*Community Risk Reduction Plan*' (or equivalent), assist in facilitating the process and discuss how the proposed measures in their plan can be geared to handle a more uncertain weather/hazard pattern in the years to come. Using the table developed in Step 2.3 (Annex 4) can assist in showing some of the points that can be considered in the list of issues that is extracted from the tools using the 'wall method'. The risk reduction plans are the most important outcomes of the VCA process, and proper facilitation should ensure that the plans build not only upon past experiences and historical evidence of disasters, but also consider emerging/changing risks.

In some cases the risk reduction plans cannot reduce the symptoms of climate change (such as sea level rise, changes in seasons), but we can avoid adding to the problem. For example if a coastal area is vulnerable to sea level rise, it is impossible to stop the sea level rise, but the community risk reduction plan can, for example, include reduction in sand mining that, if continued, will aggravate the problem.

2.7 What next?

Information you have gathered in the VCA on changes that communities are noticing and strategies that they come up with to deal with them in '*Community Risk Reduction Plans*' can

be very useful tools for making recommendations to government agencies at different levels (advocacy).

Your findings on changing disaster risk during community visits may also be important for informing your National Society's plans. For example are hazards occurring in new areas? Are new hazards emerging? What does this mean for positioning disaster stocks, training teams of volunteers etc?

Remember: trying to incorporate climate change concerns into the community-based work is new to everyone, not just people in the Red Cross Red Crescent. You are at the forefront of this new field of work, which makes it extra important that you document the work and share what works and what doesn't as widely as possible. You may even find forums for practitioners in your country that are sharing their approaches to this. There are also a growing number of international forums for sharing these experiences.

3. Things to keep in mind

Climate information – a meeting point between community and scientific knowledge

Annex 5 demonstrates that one of the main differences between a usual VCA and a VCA that considers climate change is the intersection of community knowledge with external knowledge about climate change. As our climate changes, it becomes more important than ever to ensure communities have access to relevant and updated information people can use for decision making. Scientific information about climate change is often focusing on expected long term changes several decades into the future, but seasonal forecasts and short term weather forecasts are usually more relevant to people. Becoming better at using shorter-term forecasts is one of the steps towards adapting to a changing climate.

Using information at different timescales

Some parts of the world are regularly impacted by year-to-year variability in rainfall due to factors such as El Niño and La Niña (for example SE Asia, Africa, Americas & Pacific). If you are interested in linking seasonal forecasts to the community level activities we suggest you get in touch with the Climate Centre. The process is likely to involve working with the meteorological office and whoever is responsible for early warning creation and dissemination in your country.

Communicating climate change

You can facilitate the VCA process as described above – and incorporate concerns for increased weather variability in programmes – without actually using the term/concept “climate change”. But as you gain more confidence in the issue, you may introduce the concept of climate change.⁶ Be creative (you could get youth volunteers to put on a drama for example). Through careful training, facilitators must feel confident in explaining the concept of climate change and relating it to the community's context. The important part is to *be careful not to over-emphasise climate change*; remember that there are many issues that a community faces. It is better to incorporate climate change messages alongside other messages (e.g. in areas where water availability is an issue, information on the drying trends occurring in the country can help point out why improving water conservation/harvesting practises is important) and to keep it simple. It is important to gauge what level of education the community members have had and tailor discussions about climate change accordingly.

Discussions of climate change with communities can seem daunting, but it doesn't have to involve explaining complicated concepts. The best approach is to begin discussions about

⁶ See more in the Climate Guide: <http://www.climatecentre.org/site/publications/85>

climate change based on participant's own experiences – how local weather impacts upon their daily lives and affects their livelihoods. These can be identified during the VCA process. If you find that people notice changes are taking place, and would like to know why, then you could present more information about the causes of climate change. The best point to communicate about the concept of climate change may be towards the end of the VCA data collection – too early and it will influence what the community tells you, too late and it won't be considered in community action planning.

If you choose to introduce discussions on climate change with communities some of the basic points you could consider conveying include: 1. different types of changes are occurring everywhere, not just in their community, 2. some of the changes are likely to get worse, 3. There are measures we can take to address the impacts (ie. through the risk reduction action plan). You might also consider contacting other resource people in-country, who may have experience discussing climate change with communities, so that you don't have to start from scratch.

Belief systems

When asked why people think changes are occurring, often they might say 'because we have done something bad' or 'God is punishing us'. This kind of explanation can lead people to believe that things will soon return to normal or even worse, to fatalism or inaction. It is important to consider people's belief system when trying to understand how a person might choose to take action or not. This form of thinking may be changed through access to new information given in sensitive ways.

A note on networks

Reference has been made to many stakeholders such as Meteorological offices, Environment Departments and NGOs with climate change knowledge. Think of these as a helping hand. We at Red Cross/Red Crescent can't be experts on everything, but combining knowledge with others can be very fruitful. For example, climate change may affect agriculture-dependent livelihoods and therefore adapting the agricultural practises to new climate patterns require linkages with relevant agencies. For a list of climate change-related stakeholders and potential questions to ask them, find links on this page: <http://www.climatecentre.org/site/getting-started>.

Impacts of climate change can be two pronged: changes in average conditions over time, such as rainfall, sea level, temperature etc., and changes in the nature (frequency and severity and distribution) of disasters. Considering climate change in the VCA process may result in coming across issues that are difficult to deal with (such as declining agricultural production and unemployment) and this may require us to seek advice from others, or advocate for others to get involved as partners in assisting communities in addressing the wider range of external challenges they are facing.

Climate change adaptation funding

Climate change adaptation funding will trickle to national governments and civil society to assist in addressing the growing impacts of climate change. While the activities of Red Cross / Red Crescent already go a long way towards assisting people deal with climate risks, it is necessary to more specifically incorporate climate change for two reasons: 1. So that people consider not just the past but also the trends and future patterns in their planning 2. That climate change benefits the most vulnerable. For Red Cross / Red Crescent to assist in spending this funding in the most appropriate manner, our activities will need to be beyond 'business as usual': We need to show that we are serious about climate change by considering it in the regular tools we use and the practical outcomes we support via community programmes.

This guidance note aims to find a middle ground between showing what can be done beyond 'business as usual' in community assessments and risk reduction plans, without adding complex new tools that add burden to an already challenging process.

A final word: best of luck!

If you are unsure – ask for assistance from the Red Cross/Red Crescent network. There are a growing number of colleagues working out how best to consider climate change in their community based work. The Climate Centre can be contacted at climatecentre@climatecentre.org.

Annex 1. ⁷ Climate change related questions to consider in interviews for focus group discussions during a VCA

Early Warning Early Action

As our climate changes, it becomes more important than ever to ensure communities have access to disaster related early warnings. These questions focus around this:

- Where do communities get their early warnings from?
- Who receives the warnings?
- Is it only short term warnings of immediate dangers (1-5 days), or also more long term seasonal forecasts?
- Is anyone in the community responsible for giving out early warnings? What happens if the person isn't there?
- How do they currently use weather information e.g. forecasts broadcast on radio?
- Are the forecasts understood?
- Identify whether any organisations that the community and households have access to are responsible for disseminating early warnings. If not, could they be?
- Are there organisations that could be conduits for information e.g. schools, religious institutions?
- Are there weaknesses in the system that could be addressed?

Traditional/historical knowledge

- What traditional signs warn of bad weather or a change of season? Who holds this knowledge?
- What seasons does the community typically plant crops by? Has this changed?
- Is the knowledge still working?
- When do certain problems occur? Has this changed over time (decades) at all?
- Have there been occupations, buildings or services which have been abandoned / moved due to changes in the surrounding environment or climate?
- Has the temperature/rainfall patterns changed?
- Have you noticed any changes in wildlife and fish stocks/ time of year of the catch?
- Has the level of the sea changed?

Livelihoods

- Are any changes occurring that are resulting in positive outcomes for your community? Eg. Crops that can be planted?
- In what ways are the crops you plant dependent on the weather? Do you use weather warnings to know when to harvest crops? If not, why not?
- What changes have occurred over time in your family's way of earning income?
- What if people have livelihoods that are seasonal and the seasons change in length?
- Are people using coping strategies in relation to the hazards identified?
- Are changes in the number and severity of extreme events putting further demand on these coping strategies? Eg. Are men having to move away to find work more often? What impact does this have on the family?

Health

- Are there some diseases that are more common during certain times of the year?
- Have you found that some diseases have been increasing or decreasing in the last 5-15 years?
- Are there some diseases that are more common when it rains?
- Are there some diseases that are more common when it is dry?
- If the answer is 'yes' to any of the above, ask these questions:
 - o Which ones?
 - o Why do you think that is?
 - o Who is most affected?

⁷ Including adapted text from Nakalevu, T. (2006) CV&A: a guide to community vulnerability and adaptation assessment and action, SPREP, Apia, Samoa, and Daze, A *et al.* (2009) Climate Vulnerability and Capacity Analysis handbook, CARE International

- What actions are people / the community taking?
- If you know that it will rain / be dry / a certain season is approaching when a disease is more common – what do you do?
- What could you do differently?
- From which source do you receive most of your information about health problems?

Questions that can be used during stage 3. 'Analyse the information given by a community'

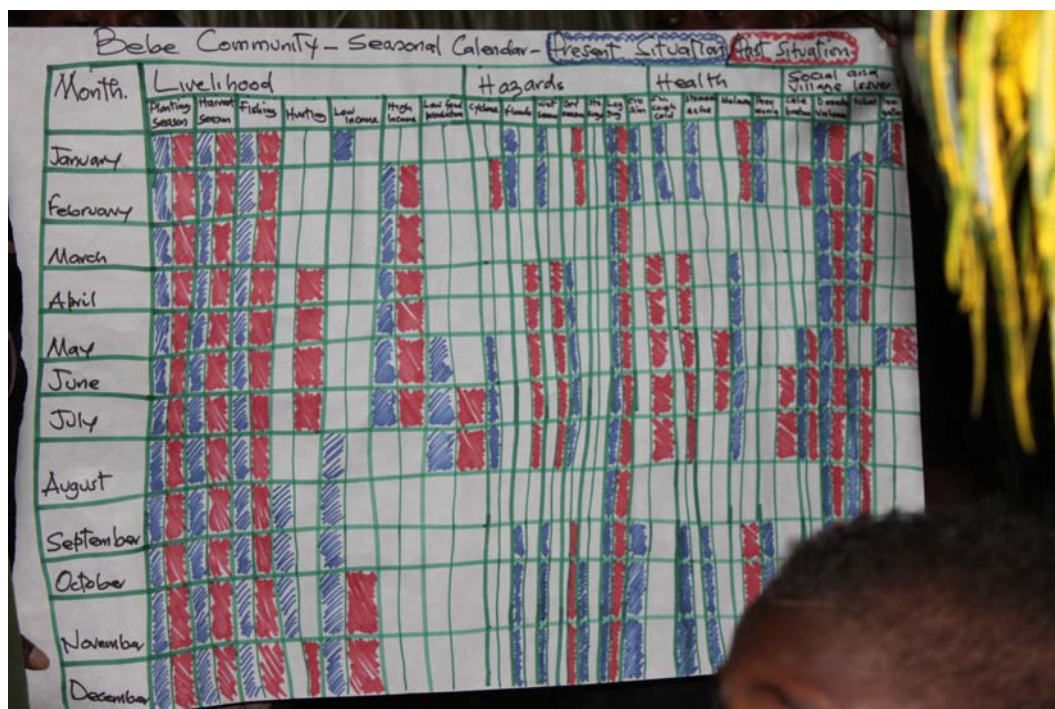
- How do weather and climate extremes affect the community? Are numbers of them increasing? Are they becoming more severe?
- Are there longer term, slower changes such as flowering, harvesting times that are affecting the community?
- Are some groups (men, women, children, farmers etc) in the community more vulnerable to climate change and extreme weather events? In what ways?
- What capacity does the community have to address problems they face? How can these be used to work on the problems you have identified?

**Annex 2. Seasonal Calendar (variations to incorporate changes in seasons)
 Could be used for plant fruiting/production, livelihoods, hazards:**

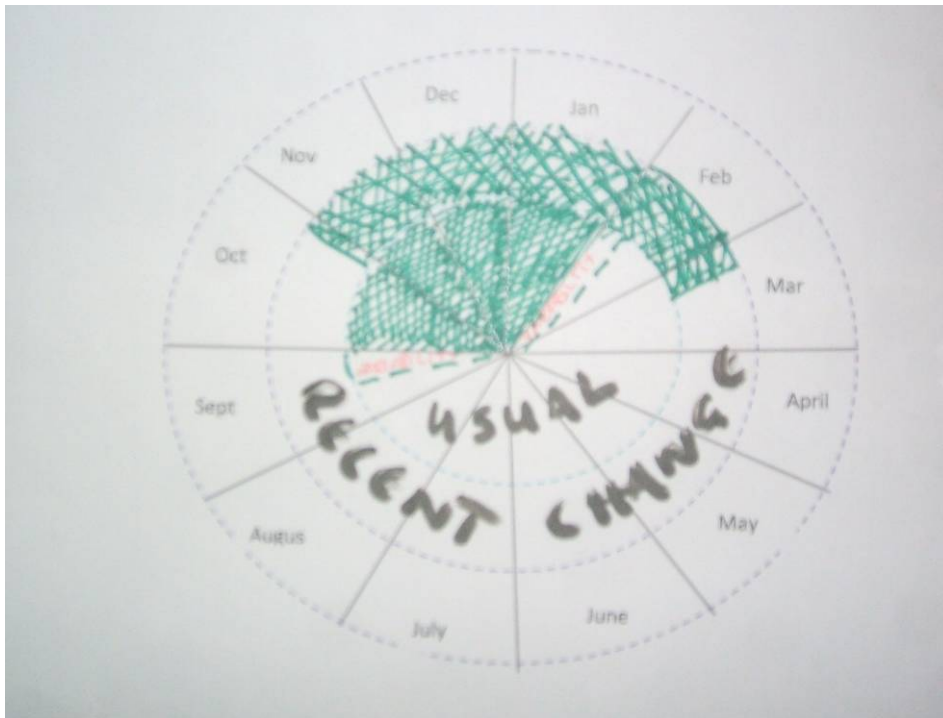
		Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Hazard	Flooding	Red	Red							Red	Red	Red	Red
	Sea surges	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
Livelihood	Cabbage		Red	Red	Red	Red	Red	Red					
	Kassava	Red	Red	Red							Red	Red	Red
Health	Malaria	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
					Blue	Blue	Blue	Blue					

Key: Red = present, Blue = past (thinking back 30 years)

Solomon Islands Red Cross example



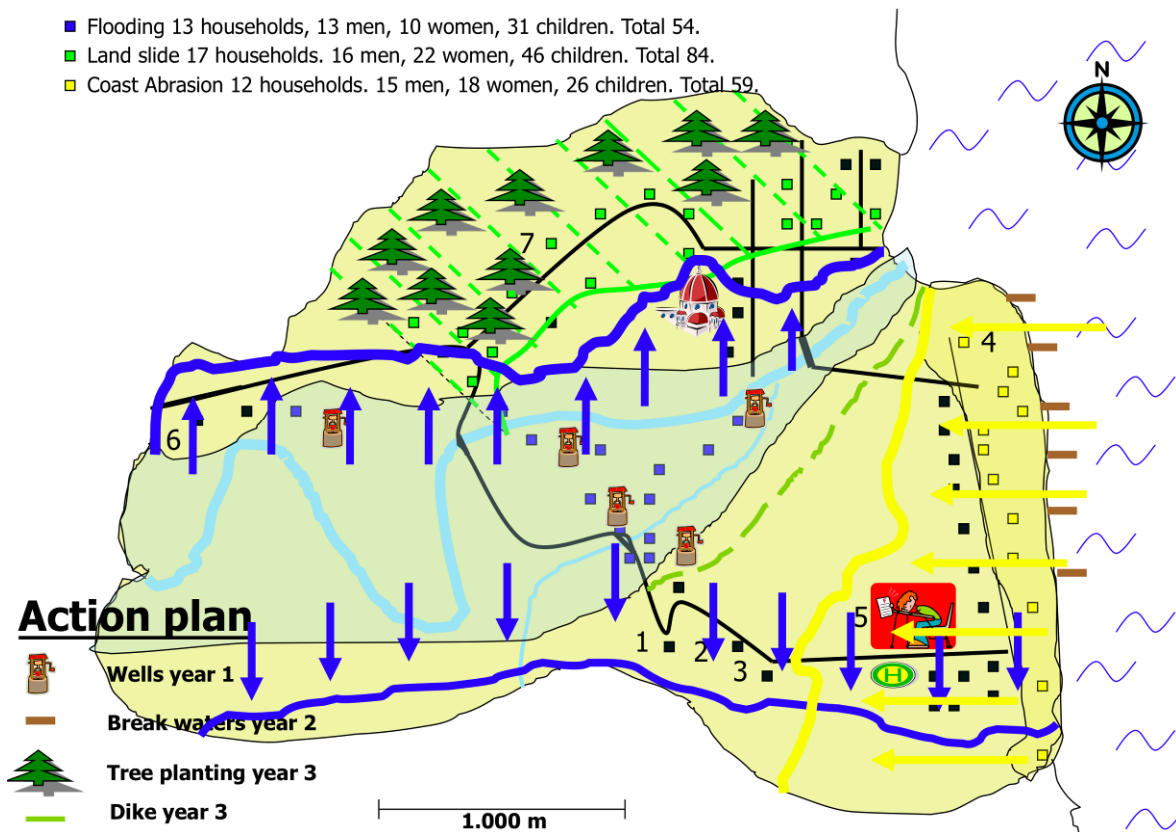
Example from Pacific VCA facilitators workshop:



*In some places communities may not be familiar with the ‘Gregorian’ calendar (January-December) that is demonstrated here. In that case, please use the local/indigenous format.

Annex 3. Risk map highlighting changing risk. Indonesian Red Cross, PMI

- Flooding 13 households, 13 men, 10 women, 31 children. Total 54.
- Land slide 17 households. 16 men, 22 women, 46 children. Total 84.
- Coast Abrasion 12 households. 15 men, 18 women, 26 children. Total 59.



Annex 4. Assessing climate change and related actions while conducting a VCA

The aim of this tool is to assist VCA practitioners in facilitating a ‘climate informed’ VCA analysis with communities and to enable consideration of the issues in risk reduction planning.

This tool can be used to demonstrate changes that have been found during the ‘wall method’ in tools such as the seasonal calendar, historical profile, hazard mapping and focus group discussions. A discussion can then be had to determine possible causes of the changes – they might be related to climate change, some might also be related to environmental degradation for example. In the case of climate change, we can’t do anything immediately to reduce the symptoms, but we can reduce the impacts from getting worse through our own actions. For example in a coastal community where sea level is rising and creating erosion, they are also sand mining for additional income. Sea level rise is not preventable, but the sand mining can be addressed if alternatives are found to income generation or if it becomes taboo in the village.

Changes observed by the community may include aspects such as:

- Changes in average rainfall,
- Changes in temperature,
- Changes in seasons (eg. timing of rainy season),
- Change in extreme weather events (rains /floods /drought /heatwaves /coldwaves /storms /storm surges/ river flooding /coastal inundations).
- Plants and animals may also change when, where, they are found
- Impacts on the use of traditional knowledge.

Changes observed by the community <i>(steps 2.2 & 2.3 in the guidance note)</i>	Are the changes good or bad? Why?	Possible reasons for changes	
		Evidence based on scientific information <i>(steps 2.1 & 2.4 in the guidance note)</i>	Other factors that may explain changes observed by communities
Example 1. Sea eroding further in land	Bad: affects infrastructure close to sea, inundates food gardens	Sea level rising 8mm per year in Solomon Islands	Some sand mining going on along coastline
Example 2. Getting hotter in the summer	Bad: old people can’t cope when its very hot Good: can grow more crops in summer	Temperature rising	
Example 3. Flooding more often	Bad: River rises more quickly and more often these days	Meteorological office reports that no change in extreme rainfall events	Logging present upstream, probably affecting stream flow

The negative changes observed may be creating issues for the community that can then be considered in the regular development of a community action plan. For example, actions that can be taken by the community, Red Cross or Red Crescent, or others such as government.

Example actions to address changes:

- Reinforcing “regular” interventions eg. Health & care, Watsan, DRR (more/better and in safer places; try to be explicit how)
- Awareness raising so community can better anticipate changes and surprises, including by better use of climate information (early warning at all timescales)
- Dialogues with other stakeholders, e.g. local authorities, (and possibly national and international policy makers)

Annex 5. Climate information flow:

Numbers in red link to the relevant section of this guidance document.

