



Participatory Monitoring, Evaluation, Reflection
and Learning for Community-based Adaptation:

PMERL

A REVISED MANUAL FOR LOCAL PRACTITIONERS





This manual is a revised version of the Participatory Monitoring, Evaluation, Reflection and Learning for Community-based Adaptation manual produced by CARE International, with technical input from the International Institute for Environment and Development (IIED). It is aimed at project managers and field staff, communities and local partners engaged in designing and implementing community-based adaptation projects. The original PMERL manual was written by Tine Rossing (CARE) and Jessica Ayers, Simon Anderson and Sibongile Pradhan (IIED). CARE acknowledges the critical role played by IIED. The text for this revised manual was prepared by Rachel Berger working as a consultant for CARE, supported by Agnes Otzelberger and colleagues at CARE's Poverty, Environment and Climate Change Network (PECCN). We are also grateful for the input and support received from many other colleagues at CARE Australia, Denmark, Nepal, UK and the Adaptation Learning Programme for Africa (ALP).



The development of this manual has been supported by CARE International UK with funding from UK aid from the UK Government, however the views expressed do not necessarily reflect the UK Government's official policies.

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ACRONYMS AND ABBREVIATIONS

ACCRA	Africa Climate Change Resilience Alliance
CBA	Community-based adaptation
CVCA	Climate Vulnerability and Capacity Analysis
DFID	The Department for International Development (UK Government)
DRR	Disaster Risk Reduction
GIS	Geographic Information Systems
IIED	International Institute for Environment and Development
IPCC	Intergovernmental Panel on Climate Change
LAC	Local Adaptive Capacity (framework)
LAPA	Local Adaptation Planning Process
M&E	Monitoring and Evaluation
MSC	Most Significant Change
NGO	Non-governmental Organisation
PECCN	CARE's Poverty, Environment and Climate Change Network
PM&E	Participatory Monitoring and Evaluation
PMERL	Participatory Monitoring, Evaluation, Reflection and Learning
PRA	Participatory Rural Appraisal
SLD	Shared Learning Dialogue
UN	United Nations

INTRODUCTION

This revised manual provides guidance on conducting Participatory Monitoring, Evaluation, Reflection and Learning in community-based adaptation initiatives (PMERL for short). It is based on the PMERL manual which CARE developed in 2012 in association with the International Institute for Environment and Development (among other organisations). CARE published the PMERL manual to help practitioners focus on community perspectives, needs and priorities when defining and tracking community-based adaptation goals.

Since then, learning and feedback from across CARE has indicated that a shorter, simplified guide would be a helpful step forward to make the integration of participatory M&E, reflection and learning processes more feasible, in particular for shorter-term projects and other initiatives aimed at or seeking to incorporate community-based adaptation.

This revised PMERL manual is aimed at project managers and field staff, communities and local partners engaged in designing and implementing community-based adaptation projects.

IT AIMS TO:

- Develop participatory strategies to help different groups and organisations affected by, or involved in, a CBA project, community action plan or similar to assess their effectiveness in achieving their objectives
- Develop locally specific, community-based indicators to measure success in community-based adaptation (CBA)
- Monitor changes in the local situation to inform community-based adaptation planning
- Show how the findings from the PMERL process can be used to improve a CBA project plan, or a wider community adaptation plan.

The original, full version of the PMERL manual is available at <http://www.careclimatechange.org/tools>



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WHAT THIS MANUAL SEEKS TO DO

This manual is about how to develop a participatory process that supports monitoring and evaluation, reflection and learning in community-based adaptation (CBA) projects, as well as projects integrating CBA (see box below).¹ Community-based adaptation involves learning at all stages – learning about how climate change affects people and their livelihoods and environment; learning how to adapt to these changes; measuring progress; and then reflecting on how to improve all of the above. Participatory Monitoring and Evaluation, Reflection and Learning, or PMERL for short, aims to facilitate this process.

PMERL does not replace the M&E process that many project teams will need to follow in order to meet the requirements of donors, or their head offices, such as providing information about the extent to which project activities and outcomes are in line with a logical framework (a tool widely used in project design to show how goals will be met). Findings from the PMERL process will, however, provide valuable information for the M&E process, particularly on behaviour change. Valuable learning will also be gained as communities systematically observe changes amongst themselves and/or their neighbours, in their environments and amongst the institutions they engage with. In turn, this learning will contribute to building adaptive capacity, which is a key objective of community-based adaptation (adaptive capacity is defined later in this section).

WHAT IS A “CBA PROJECT”?

This manual responds to a particular need for guidance on integrating PMERL into shorter-term CBA projects. Therefore this manual particularly targets initiatives with specifically allocated resources to achieve agreed outcomes within a clearly identified time frame, either distinctly aimed at or aiming to incorporate community-based adaptation to climate change. This will often (but not exclusively) be a three- to five-year project implemented by a non-governmental, governmental or private organisation, most likely in partnership with others, and spanning a number of communities within a given geographical setting. However, this manual can also be of use for participatory M&E of community-based adaptation activities that emerge from annual local government development planning processes or other CBA initiatives of shorter or longer durations. It may also be applied to larger-scale initiatives such as longer-term programmes and strategies comprising a range of individual projects, although this manual does not specifically target the integration of PMERL at this level.

WHO IS PMERL FOR?

PMERL IS DESIGNED FOR THE FOLLOWING THREE GROUPS:

- **Project managers and field staff** of organisations engaged in designing and implementing community-based adaptation projects. This group will find guidance about how to develop a participatory monitoring and evaluation process alongside the communities and partner organisations they support.
- **Communities.** The main objective of the PMERL process is to collect the information that vulnerable groups and their representatives need in order to track how well CBA interventions are working, and to

¹ While PMERL was specifically designed for community-based adaptation work, it has broader relevance to development as it follows a suite of participatory monitoring, evaluation and accountability tools developed by CARE and others. See, for example, the CARE Community Score Card tool <http://www.care.org.au/document.doc?id=1244>

enable them to strengthen adaptive decision-making at the community-level. The goal of PMERL is to enable communities to lead their own continuous process of investigation and learning, including after initial support from partners. The results can be used to help inform decision-making at the community, household or individual scale, and help communities lobby for appropriate support for effective CBA.

- **Local partners** (governmental, non-governmental and other organisations engaging in CBA). PMERL helps local partner organisations to inform and implement a more flexible and responsive approach to adaptation planning. PMERL can also be used to assess whether the investments made are having the intended results and impacts.

HOW TO USE THIS MANUAL

Ideally, the project team will initiate the PMERL process during the project planning stage. However, PMERL can also be introduced at a later stage (if an initiative is already under way), to complement the M&E system with a participatory process of monitoring, reflection and learning. A PMERL process can also be introduced when a community develops or implements its own action plan on adaptation.

Before the planning of any CBA project it is important to gain a good understanding of the context. In particular, this requires consideration of communities' vulnerabilities to climate change and capacities to adapt. This can, for example, be achieved by carrying out a Climate Vulnerability and Capacity Analysis (CVCA). In addition to this manual, you may find it helpful to read CARE's *Climate Vulnerability and Capacity Analysis Handbook* (see references).

THE MANUAL IS PRESENTED IN THREE SECTIONS:

- **SECTION 1: KEY CONCEPTS** – Explains key concepts used in community-based adaptation and participatory monitoring and evaluation (PM&E).
- **SECTION 2: DESIGNING AND ROLLING-OUT A PMERL PROCESS FOR CBA PROJECTS** – Describes how to develop a PMERL system step-by-step from design, collecting information, analysis, leading to evaluation, reflection and learning.
- **ANNEX: TOOLS FOR PMERL** – Presents a selection of tools that can be used for each stage of PMERL development. Many of these tools will be familiar to community development practitioners, though some have been adapted to the climate change context and for use in PMERL.

NOTE:

Section 1, which explains the key concepts, should be read before starting PMERL planning. Section 2 explains the PMERL process. The Annex of tools can be used in conjunction with Section 2 but is not meant to be used alone without following the process outlined in Section 2. It is important to know which questions you wish to answer before selecting the appropriate tool, and how you wish to use the information generated.

SECTION 1: KEY CONCEPTS

1.1 THE IMPORTANCE OF MONITORING, EVALUATING, REFLECTING ON AND LEARNING THROUGHOUT A COMMUNITY-BASED ADAPTATION PROJECT

Given that it is often difficult to predict the impacts of climate change, particularly at the local level, it follows that it is not always easy to know *what exactly* communities are adapting to, or what ‘successful’ adaptation looks like. Managing this uncertainty requires a ‘learning-by-doing’ approach, where communities and practitioners are able to track, respond to, and take advantage of changing contexts and unexpected events. This requires a system for monitoring changes in a variety of *contexts* and the *effectiveness* of responses to changing contexts, and then feeding this information back into the planning and implementation cycle, so that adjustments can be made as necessary.

The practice of CBA should be strongly rooted in human rights-based approaches to development and a wide acceptance of their participatory, process-oriented principles. The principles of **non-discrimination, equity and special attention to the needs and priorities of marginalised social groups** are central to the international human rights framework. Within communities, different households (and individuals within households) will experience different levels of vulnerability, whether to climate change or to other shocks and hazards. Gender, for example, is a key factor affecting vulnerability. Inequalities in the fulfilment of rights, and in the distribution of resources and power are at the root of poverty and vulnerability.

An overarching goal of the PMERL approach is to provide a platform for local stakeholders (community members and other people involved in a CBA initiative) to articulate their own needs, priorities and vision of change, since empowerment is a fundamental part of building adaptive capacity among poor and vulnerable people. PMERL also seeks to instigate continuous and joint learning and reflection between these groups.

People benefit from being involved in monitoring and evaluation, because they gain an understanding of the process of adaptation, skills in observing change, and capacity to analyse the impact of change in their own lives and that of their community and environment. It is hoped that, by taking part in the PMERL process, local people will be able to manage community and local-level CBA strategies and plans so that they can continue adapting to the impacts of climate change beyond the scope of a given project.

This manual seeks to make the PMERL process relatively simple to carry out at the community level by staff from a wide range of institutions in varying socio-cultural and ecological settings. Typically the users of this manual may be project staff working for organisations carrying out CBA initiatives. PMERL does not require large amounts of pre-existing data but draws on existing community-level planning systems and adapts familiar tools and practices used by practitioners of community-based development.

1.2 KEY ADAPTATION CONCEPTS USED IN THIS MANUAL

The definitions below explain the key concepts and terms used in this manual. You may hear them used in different ways by other organisations. Concepts of adaptation, CBA, vulnerability and adaptive capacity are adapted from the *CARE Climate Vulnerability and Capacity Analysis Handbook*.

1.2.1: COMMUNITY-BASED ADAPTATION TO CLIMATE CHANGE

Adaptation can be broadly described as a process of adjustments to actual or expected climate change and its effects in order to reduce harm or exploit potential benefits. A key element of adaptation is reducing vulnerability (1.2.2), and a second element is building adaptive capacity (1.2.4). Community-based adaptation (CBA) to climate change is a community-led or community-driven approach to adaptation that should feed into and be supported by planning and programmes produced by local, district and national governments. It is an integrated approach which focuses on building resilience (1.2.3), to both current and future climate stresses. It includes reducing the risk of disasters, supporting development which will be resilient as the climate changes, while also addressing underlying causes of vulnerability. CBA seeks to empower vulnerable communities and their local governments and service providers to understand and analyse how the climate is and will continue to impact on their lives. It is about the process of reducing the negative impacts on communities, households and individuals and must be based on local priorities, needs, knowledge and capacities, taking into account social diversity.

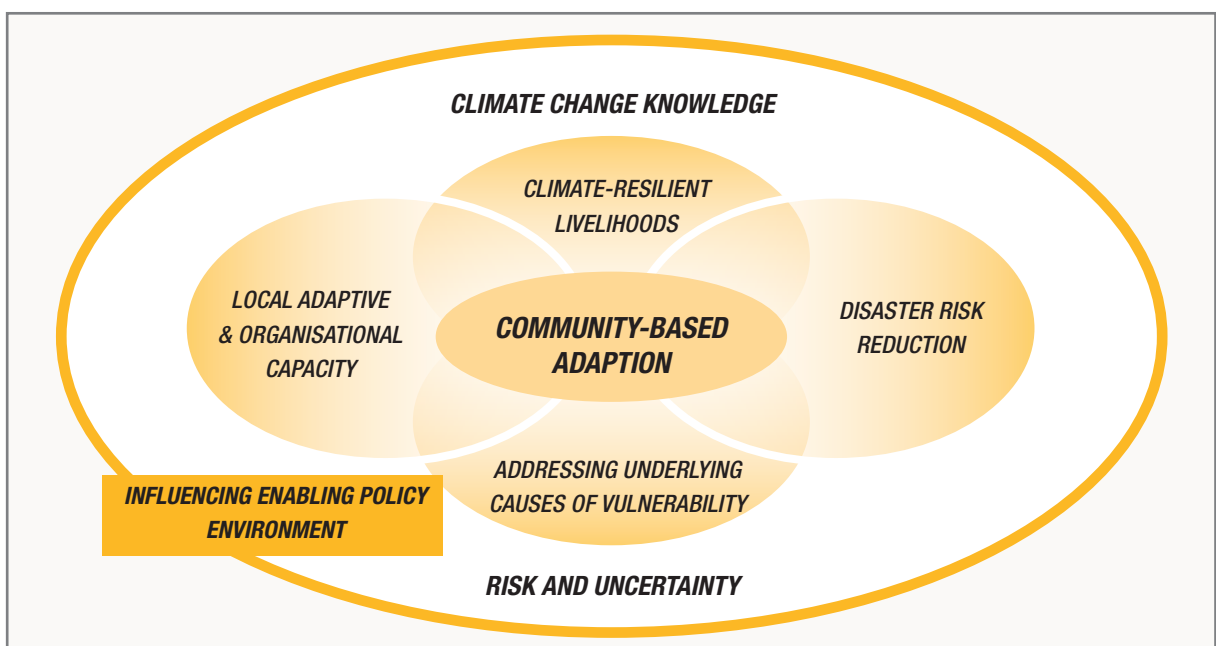
CARE has developed a framework for CBA that enables communities to gain adaptive capacity and plan adaptation actions. CBA must be informed by climate science and local observation of climate change as well as an understanding of the increased risks and uncertainties that climate change brings.

Four key elements are required for successful adaptation at community level, each of which is informed by climate analysis, climate risks and the national policy context. These are:

1. Climate-resilient livelihoods achieved through diversification of land use and income sources;
2. Disaster risk reduction strategies to reduce impacts of increasing climate-related natural disasters on vulnerable households;
3. Strengthening capacity in access to climate information, managing risk and uncertainty and helping local civil society and governmental institutions to better support communities in their adaptation efforts;
4. Local- and national-level empowerment, advocacy and social mobilisation to address the underlying causes of vulnerability.

These four elements are illustrated in Figure 1.

FIGURE 1: THE CBA FRAMEWORK



There is no one solution to adaptation interventions, so CBA plans will differ across communities and also over time. CBA is about continually making choices based on a range of up-to-date information. An effective CBA process will result in communities being empowered to own the process and make livelihood decisions which are sustainable and resilient in the face of a changing climate.

1.2.2: VULNERABILITY

A community's vulnerability to climate change is affected by the extent to which the community is exposed to severe climate events or trends, how these events or trends affect people's lives and their environment, and people's ability to adapt to the impacts. Some communities and social groups are more exposed to climatic hazards than others. For example, coastal communities will have higher exposure to sea level rise and cyclones, while communities in semi-arid areas may be more exposed to drought. A livelihood dependent on rain-fed agriculture is much more sensitive to changing rainfall patterns than one that depends on mining, for instance. This differs within a community, across wealth, gender, age, ethnicity and other factors. For example, if the changing climate leads to more frequent flooding in a particular area, people living close to a river will be more vulnerable than their neighbours living on higher ground.

When helping people to adapt to climate change impacts, it is also vital to address underlying development issues. In general, people living in poverty are more vulnerable to climate change. A large proportion of the world's poorest people live in areas where the climate is also extreme – semi-arid and arid areas, and areas with a monsoon climate where seasonal flooding occurs. Poverty also means limited access to land and other resources that can help facilitate adaptation. Within communities, some social groups are also more vulnerable than others. Wealthier people who own land and livestock will be less vulnerable to hunger caused by extreme weather events than those whose livelihoods depend on the harvest of one crop. Responsibilities at home, and unequal access to information, resources and services render women particularly vulnerable to the impacts of climate variability and change in many contexts. Other groups that are often socially and politically marginalised, such as ethnic minorities or the elderly, can also be highly vulnerable.

1.2.3: RESILIENCE

Resilience is often seen as the flipside of vulnerability. In this manual we define resilience as:

*'The ability of countries, communities, and households to manage change, by maintaining or transforming living standards in the face of shocks or stresses without compromising their long-term prospects.'*²

The change that needs to be managed can result from shocks and stresses that are not only caused by climate change, but also other factors, such as violent conflict, changing migration patterns or changes in prices for crops and livestock.

Becoming resilient means moving beyond short-term coping strategies and towards longer-term development in spite of, or in light of, climatic and other shocks and changes. A resilient community has the following characteristics:³

² UK Department for International Development (2011) *Defining Disaster Resilience: A DFID Approach Paper*.

³ Bahadur, A. et al (2010) *The resilience renaissance? Unpacking of resilience for tackling climate change and disasters*. Brighton: Institute of Development Studies.

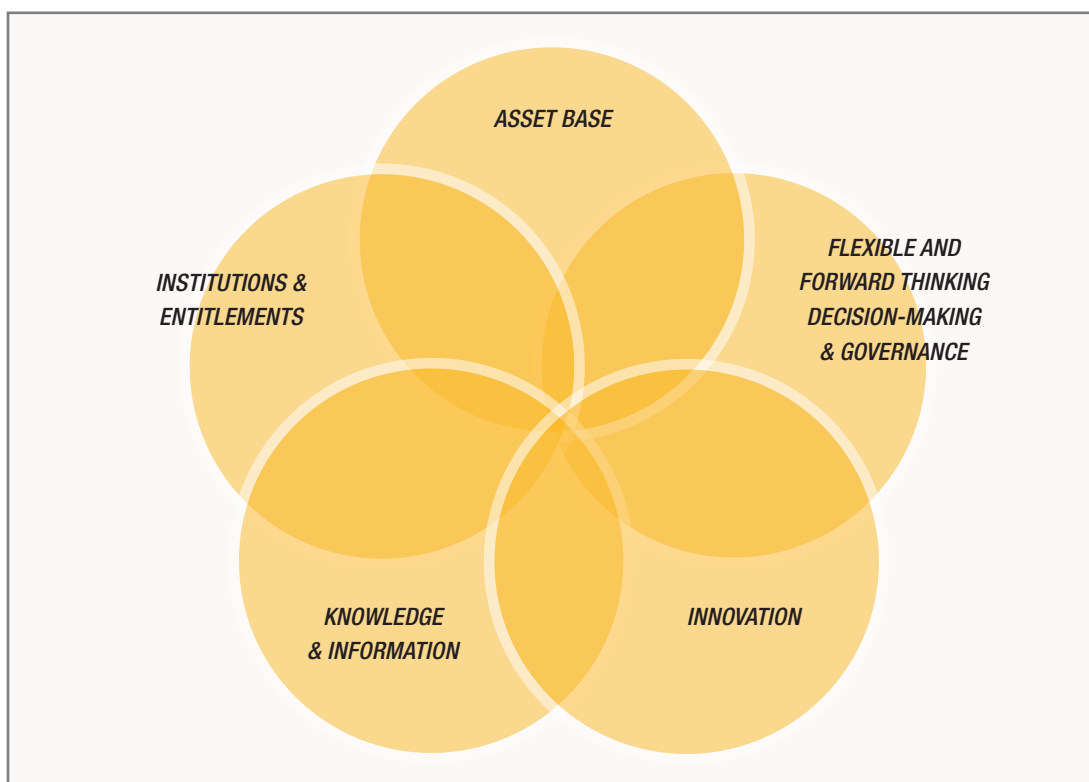
- A high level of diversity, in terms of access to assets, voices included in decision-making and in the availability of economic opportunities.
- A high level of connectedness between institutions and organisations and information, knowledge, evaluation and learning moving freely up and down and across these scales.
- The degree of social cohesion and capital, allowing individuals to be supported within existing social structures.

1.2.4: ADAPTIVE CAPACITY

Adaptive capacity is what enables those affected by climate change to make choices and decisions which allow them to continue to realise sustainable development and reduce and spread risks in the face of continuous change and uncertainty. It enables people to 'bounce back' from shocks and successfully adapt to longer-term trends or changing conditions in the future.

Adaptive capacity refers to the potential to adapt, as and when needed. It depends on people and institutions having the right tools and the necessary enabling environment to allow them to adapt successfully over the long term. Adaptive capacity is context-specific and varies from country to country, community to community, between social groups and individuals, and over time. The Africa Climate Change Resilience Alliance (ACCRA) identified five characteristics that comprise local adaptive capacity (see Figure 2). The figure shows the relationship between characteristics of adaptive capacity at the local level.

FIGURE 2: THE ACCRA FRAMEWORK FOR LOCAL ADAPTIVE CAPACITY⁴



ADAPTIVE CAPACITY AT THE LOCAL LEVEL

Characteristic	Feature that reflects a high adaptive capacity
Asset base	Availability of key assets that allow the system to respond to evolving circumstances
Institutions and entitlements	Existence of an appropriate and evolving institutional environment that allows fair access and entitlement to key assets and capitals
Knowledge and information	The system has the ability to collect, analyse and disseminate knowledge and information in support of adaptation activities
Innovation	The system creates an enabling environment to foster innovation, experimentation and the ability to explore niche solutions in order to take advantage to of new opportunities
Flexible forward-looking decision-making and governance	The system is able to anticipate, incorporate and respond to changes with regard to its governance structures and future planning

⁴ Levine, S. et al (2011) *Rethinking Support for Adaptive Capacity to Climate Change: The Role of Development Interventions. Findings from Mozambique, Uganda and Ethiopia*. London: Overseas Development Institute.
<http://community.eldis.org/5a35bbfb/ACCRA%20Rethinking%20Support%20Report%20Final.pdf>

1.3 KEY CONCEPTS RELATED TO PARTICIPATORY MONITORING AND EVALUATION

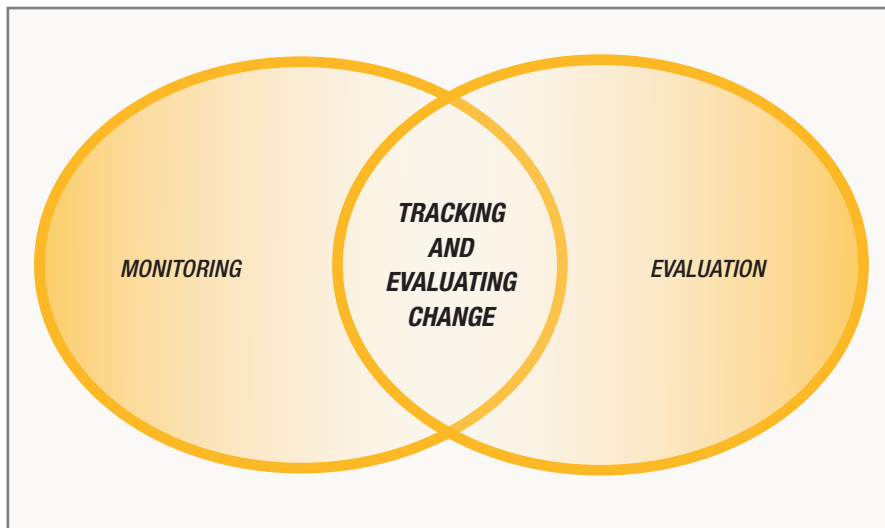
Monitoring and **evaluation** are complementary concepts that overlap (as shown in Figure 3).

Monitoring describes the systematic tracking of where an initiative is at any given time in terms of activities, inputs, outputs, targets and outcomes. It can also be used to describe the tracking of trends.

Evaluation generates evidence about why and how well the outputs, targets and outcomes of an initiative are being achieved. Evaluation assesses the changes that have been identified through monitoring.

Monitoring is done on a regular basis, whereas evaluation is carried out periodically. Monitoring collates observations, while evaluation assesses the meanings behind these observations. The information collected through monitoring can be used for regular evaluation of progress so that adjustments can be made as needed as a project proceeds and can be used to inform the design of subsequent projects or activities.

FIGURE 3: MONITORING AND EVALUATION



Participatory monitoring and evaluation (PM&E) assesses change through processes that involve many people or groups, each of which is affecting, or is affected by, the changes being assessed. Stakeholders negotiate an agreement about how progress should be measured and how the findings will be acted upon. PM&E draws on the methods and tools of participatory action research including Participatory Rural Appraisal (PRA).

CARE has built on PM&E as a methodology to reduce social inequalities including gender inequalities. When done well, PM&E is a process of collective learning that brings different types of decision-makers and knowledge together to assess and negotiate project strategies. Engaging decision-makers (including communities) in this process means all stakeholders have the information they need to respond to change and improve project effectiveness. PM&E carried out in this way leads to a significant shift in the power dynamics between project staff and community members. This requires a strong commitment from project staff to respect and incorporate the opinions and insights of local people. The voices of women in particular need to be strengthened in many contexts, and the importance of addressing gender inequalities is outlined in more detail below. The PMERL process builds on PM&E to facilitate collective learning and reflection that can then feed back into project planning and implementation to ensure outcomes are achieved.

PM&E GLOSSARY

BASELINE: The starting point of a project from which a comparison can be made. It is the first measurement of indicators, undertaken before the start of the project.

GOAL: The higher-order objective (or desired outcome) which the project should contribute to.

INDICATOR: Measurable or tangible signs that something has changed. By monitoring indicators, you are able to find out whether the desired change is happening.

OBJECTIVE: The purpose or desired outcome of a project.

OUTCOME: The effects of project outputs. They describe what successful CBA looks like.

OUTPUTS: The products that result from the project activities.

STAKEHOLDER: A person or group affected by, or with an interest in, the project or programme.

TARGET: The change we hope to see in the indicator.

1.4 THE IMPORTANCE OF ADDRESSING GENDER INEQUALITIES IN THE PMERL FRAMEWORK

Social inequalities increase harmful climate change impacts on many poor people while constraining their options for taking action to reduce them through adaptation. Gender, along with other factors such as wealth and ethnicity, often determines the roles, opportunities, power, access to and control over resources for women and men in any culture. It is often a key factor in determining the extent to which people's rights are fulfilled. As such, gender inequalities form an important, and often insufficiently addressed, barrier to equitable adaptation.

Gender roles and power relations have strong implications for the vulnerability of whole families and communities. Climate change impacts are causing new changes and shifts in these roles and power relations to emerge, which add to the varied and continually changing political, economic and socio-cultural contexts that contribute to differential vulnerabilities between social groups. These inequalities increase many poor people's vulnerability to harmful climate change impacts, while limiting their options for coping and adaptation.

Inclusive and meaningful participation of all community groups, particularly the most vulnerable, is needed in all phases of a CBA project to foster women's and men's self-confidence, responsibility, and leadership, which are vital to positive and sustainable adaptation and development.

CARE is committed to addressing gender inequality, and so M&E of CBA needs to collect information that is disaggregated by gender in order to:

- **ASSESS** the knowledge, attitudes and practices related to gender within CBA for successful implementation of community-based adaptation;
- **MONITOR** and evaluate gender dynamics not only in absolute terms (numbers of female/male beneficiaries) but also in relative terms (increases or decreases in gender gaps, changes in gender relations);
- **MEASURE** the evolution of gaps in access to/control over resources to ensure an accurate picture of social inequalities and their evolution over time;
- **MONITOR AND DOCUMENT** gender achievements in CBA projects to generate critical knowledge and evidence which can then be used to advocate for and contribute to an enabling environment for gender CBA policy.

More information on addressing gender inequality can be found in CARE's gender toolkit, listed in the references at the end of this manual.

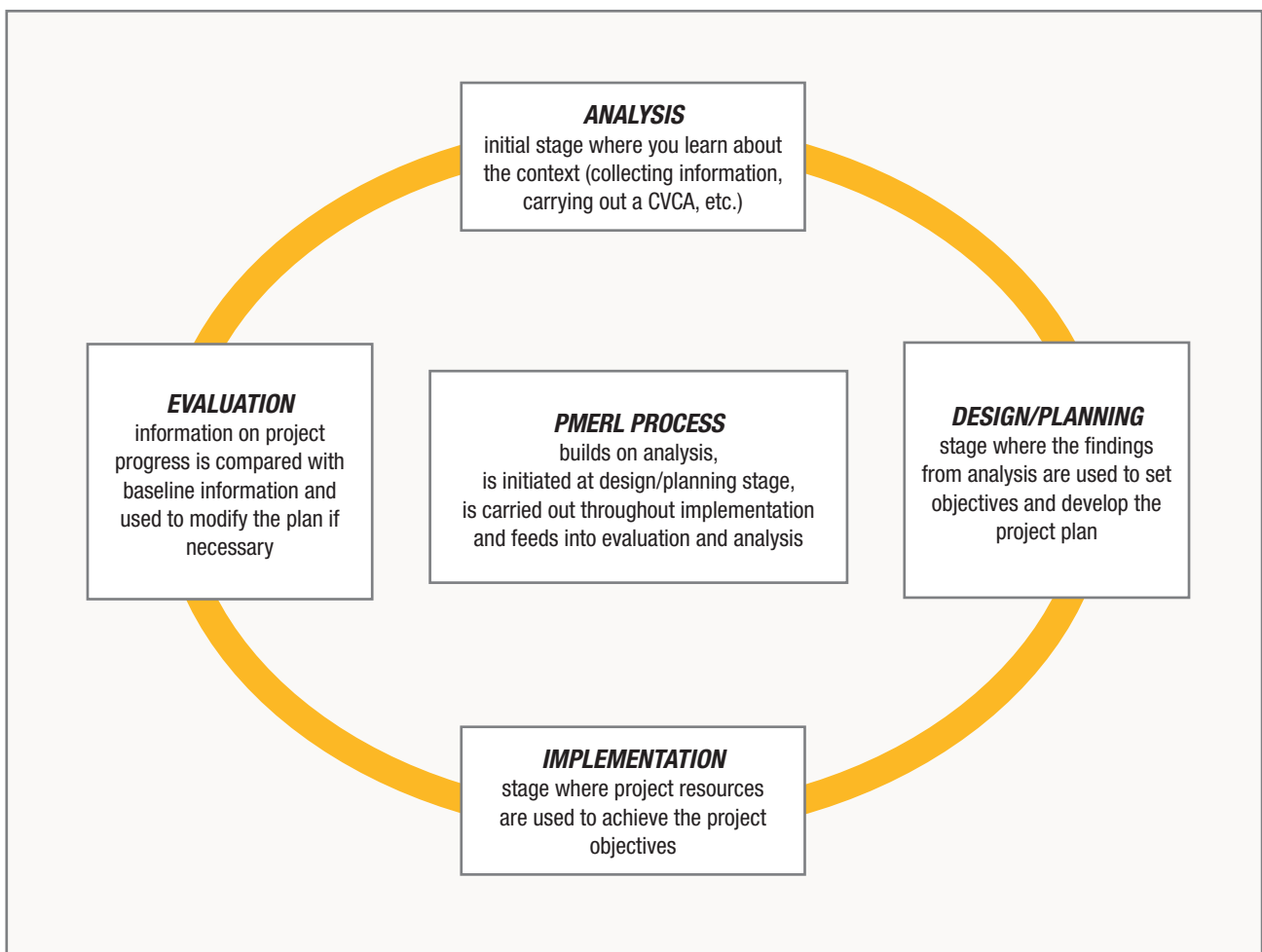
SECTION 2: DESIGNING AND ROLLING OUT A PMERL PROCESS FOR CBA PROJECTS

A PMERL process aims to involve all sections of the community in measuring their progress towards building capacity to adapt to current and future impacts of climate change. Section 1 of this manual explained the key concepts and outlined why monitoring and evaluation is vital during and after the implementation of CBA projects. In this section, the process of designing and carrying out a PMERL process is described. Section 2 also explains how to establish a participatory process where the community, as represented by different groups within it, and representatives of other stakeholders (partners, local institutions, etc.) involved in the CBA project, together agree the important changes to monitor, and then jointly reflect on the information collected and whether the objectives of the CBA project are being achieved.

It is hoped that the process of developing and carrying out a PMERL strategy will build both confidence and capacity in a community so that once a funded project has ended, the community can continue with the PMERL process to build their adaptive capacity further, continue to reflect on ongoing changes and use these insights to inform decisions and plans.

The diagram below shows the key steps in a project cycle, from analysis through to evaluation of the project's success in achieving its objectives.

FIGURE 4: THE PMERL PROCESS IN THE CBA PROJECT CYCLE



Ideally, the PMERL process builds on information gathered at **analysis** stage and is introduced during the CBA **design or planning** stage. It is important to have completed a CVCA analysis or similar vulnerability analysis before designing a PMERL process. Ideally, the initiation of PMERL should also go hand in hand with setting goals at the design or planning stage, where outcomes are also set, and indicators and targets for change are developed. It is also important to ensure there is enough information about the situation before the project began to compare with the situation as the initiative progresses, so changes during and after **implementation** can be tracked and reflected on. Setting indicators and conducting baselines at the planning stage means progress can be monitored from the outset. For example, if a project objective is to increase production from drought resistant crops, it is important to know what level of production is being achieved currently, without the project's help.

Monitoring keeps everyone involved informed about how the project is progressing. Learning points taken from this process (namely about what is happening on the ground and whether key objectives are being met) can then also lead to adjustments in project planning, while also being used to feed back into the analysis and design of a next project phase, any follow-up activities, or the design of a different project altogether. Following this process is a key purpose of the PMERL strategy.

However, CBA projects and CBA planning and action processes have to be flexible enough to deal with a range of different realities and can sometimes follow a different pattern to that described above. In certain cases, a climate vulnerability analysis and other baseline data are only gathered when a CBA project is already underway. Sometimes, a CVCA analysis precedes or is included in a broader baseline study – and sometimes it follows it. In other cases, there may be a desire to strengthen community voice and engagement in tracking the progress of a CBA project or plan that is already underway and has clearly identified goals. Taken together, this all means that a degree of flexibility is required when it comes to integrating PMERL into a project.

PMERL AND M&E SYSTEMS:

The PMERL does not replace a typical project M&E system that ensures the activities and outcomes of a project or larger undertaking are in line with a logical framework (a logical framework is a tool widely used in project design to show how goals will be met). Most projects, whether primarily concerned with CBA or incorporating CBA, will require an M&E system that is much broader than the PMERL process alone. The findings from PMERL do not replace such M&E systems but complement them with valuable information gained from a participatory method of tracking changes, reflection and learning.

THE FOUR KEY STAGES OF A PMERL PROCESS

1. ESTABLISHING THE PMERL TEAM

2. PLANNING AND CONDUCTING THE PMERL PROCESS. This includes deciding on outcomes and indicators, setting out baseline information and deciding how to collect information and use it. This stage has five steps:

1. Mapping key stakeholders and their strategic interests
2. Deciding what to monitor
3. Developing indicators
4. Measuring baselines and assembling information
5. Putting the monitoring plan together and matching it with the resources available

3. INFORMATION ANALYSIS

4. EVALUATION THROUGH LEARNING, REFLECTION AND FEEDBACK

These stages are explained in sections 1-4 below.

STAGE 1: ESTABLISHING A PMERL TEAM

The PMERL process should be managed by a small team of people who represent different stakeholder groups including different gender groups. The team needs to be facilitated by one person who takes responsibility for the PMERL process. Particularly where PMERL has been incorporated at an early stage into the CBA planning process, the membership of the PMERL team may overlap with the CBA project/planning team if there are community or organisational representatives who are able and willing to serve in both teams. In any case, the PMERL team (composed largely of members of the community) and the CBA project team will need to work closely together, particularly as the latter will need to support the PMERL team at stage 3 with information analysis.

STEP 1.1: SELECT A FACILITATOR

The facilitator is likely to be a member of the project staff who is familiar to the community and understands the context within which the project is taking place. They should be experienced in participatory processes. He/she will encourage discussion, drawing out contributions from different groups of stakeholders and take information back to the project team for analysis (see stage 3).

It is likely that selection of the facilitator will be done by the project team or the lead partner organisation although sometimes communities will take the lead in selecting a suitable person.

KEY REQUIREMENTS OF THE PMERL FACILITATOR

Negotiation skills and in some cases conflict resolution skills

Good listening skills

Ability to build trust among participants

Ability to encourage the sharing of ideas

Ability to keep the group focused on the task

STEP 1.2: SELECT TEAM MEMBERS IN PARTNERSHIP WITH THE COMMUNITY

It is important that PMERL team members include both women and men, and representatives from groups which are most vulnerable to climate impacts, which make up the main target groups for CBA projects. It may be useful to include a representative from a local decision-making body such as local government. This might be someone who is already representing the local authority in the CBA planning process. The whole community, and the various groups within a community, need to be consulted about who should be in the team. This can be done at a meeting of the whole community, or at several meetings of smaller groups, according to gender or livelihood groups.

KEY CRITERIA FOR SELECTING THE PMERL TEAM

- Composed of 6-8 people, with a balance of women and men
- Different social, wealth and livelihood groups within the target community must be represented
- Those selected must have the group's authority to speak on behalf of the group they represent
- When selecting people, community groups should be asked:
 - Who has an essential perspective or knowledge?
 - Whose absence will mean important information is missed?
 - What can be done to ensure the presence of these people?
 - If team participants change over time, how will this affect the process?

The team's tasks include gathering information and documenting it so that it can be analysed by project staff. The team will then present the analysis to the community and other stakeholders, for the evaluation, reflection and learning process (stage 4). The facilitator will work with the team to develop the PMERL strategy and will also undertake any training and capacity building necessary to enable the team to carry out its tasks. Team members need to understand why monitoring and evaluation is important, and how the community can benefit from being involved in the process. All team members must be willing participants, and be able to spare the time to take part. Since people from vulnerable groups often have little capacity, time and/or resources to attend meetings, the work the PMERL team is expected to undertake must reflect the capacity of the team's chosen members. Childcare and other support in kind may be necessary to facilitate participation. Where the vulnerability of many groups in a community is high, and their capacity to take part in a lengthy process of information collection, analysis and reflection is limited, the PMERL process will need to be simpler and will require more staff time for support and capacity building.

STAGE 2: PLANNING AND CONDUCTING THE PMERL PROCESS

There are five main steps in designing and carrying out the plan and these are explained below. These steps will be organised by the PMERL team, and may be largely carried out by the team, involving other groups as seems appropriate.

STEP 2.1: MAPPING KEY STAKEHOLDERS AND STRATEGIC INTERESTS

It is important to know who is involved in, or affected by, a project. These people or groups – the stakeholders – can be broadly divided into three groups: those who will be affected directly by the CBA project as the intended beneficiaries, those who will be affected indirectly (either positively or negatively) and those people or institutions that can influence the project. Mapping stakeholders and their specific interests is also a good way of helping people to recognise the value of having different groups represented and involved.

It is likely that much of this information will already have been gathered during the analysis stage through community meetings and focus group discussions. If not, a useful tool for mapping stakeholders, and particularly those who can influence the project or support the community in its adaptation efforts, is the Venn diagram. A Venn diagram helps people to understand the key actors that influence CBA, and their connection with the community (see Tool 3 in the Annex). Separate meetings can be held with external stakeholders who may play a role in influencing the project. Another useful tool, especially where there is an interest in identifying how particular services are reaching members of the community, is the Community Score Card (a tool developed by CARE, see references).

KEY QUESTIONS TO TACKLE

- Who are the different stakeholders and what are their strategic interests?
- What is their role in the CBA project, how are they affected by, or influencing, the CBA project?
- Are different gender groups, and particularly vulnerable social groups, included in the stakeholder mapping?

The information can be organised as below:

TABLE 1: EXAMPLE OF STAKEHOLDER MAPPING TABLE

Stakeholder	Strategic interests	Role in CBA project
Mother and child groups	<ul style="list-style-type: none"> ■ What changes will the project make to the village health post? ■ How will the project deal with increased flooding, which affects the health post? 	Target group
Project field staff	<ul style="list-style-type: none"> ■ Are project activities being undertaken on time? ■ Are they reaching the most vulnerable groups? 	Project implementers
Village level health facility management committee member	<ul style="list-style-type: none"> ■ How will the health post combat an increase in malaria? ■ How will the project help secure health services during flooding? 	Influential service provider

The mapping feeds into the next step in the process, when decisions will be made about which information is most important for the PMERL process to gather and track. Stakeholder interests and roles will be important considerations.

USEFUL TOOLS

Tool 3: Venn Diagram

STEP 2.2: DECIDING WHAT TO MONITOR

When deciding what to monitor in a PMERL process, it is important to consider three types of information. Secondly, consideration must be given to the type of information each stakeholder group will need to identify and reflect on the progress of a CBA project. This is explained in further detail below.

A) RESULTS – Information about changes in the adaptive capacity and climate vulnerability of different groups at the community level as a result of CBA practice and support. The PMERL group must decide:

- Which outputs or outcomes are important
- What type of information can be used to show that new activities or changes in behaviour have resulted in a change in outputs or outcomes

B) PRACTICE (ACTIVITIES) – Information about the progress of community adaptation plans, and changes in the adaptive behaviour of vulnerable people as a result of CBA support. The PMERL team must decide:

- Which practices and activities to track to enable the team to identify changes in activities and changes in behaviour
- Whose practices and activities should be tracked

C) CONTEXT – Information about the context within which CBA happens which interacts with both CBA practice and results. In other words, factors that lead to climate vulnerability but which are not necessarily directly related to climate change. The PMERL group must decide:

- Which external factors might influence activities and results
- Which of these are affected by climate variability and change, and which are not
- Which other external factors are important to track (consider, for example, market changes, political or institutional changes, and social and environmental changes).

A) INFORMATION ON RESULTS AND OUTCOMES

Planned results and outcomes must be translated into outcome statements that can be monitored. Outcome statements are simple, positive statements about desired changes as a result of the CBA project. They describe what successful CBA looks like for different groups of stakeholders. They also help us to understand whether CBA project activities are meeting the needs of the target groups in the ways that matter to them.

Outcome statements are best done through focus groups or small community meetings once all stakeholder groups have been mapped. To create an outcome statement, follow these steps:

- Discuss what high adaptive capacity looks like. Tool 5, 'Adaptation Visioning' can be helpful. It is important that realistic outcomes are set *in light of identified climate trends*. These may have been identified during the CBA planning process, but Tool 4, 'Envisaging future climate scenarios' can be used if not.
- Develop statements that describe the road towards high adaptive capacity.

Develop further detail in the outcome statement, identifying the main actors and institutions involved in delivering the change the community wants to see.

USEFUL TOOLS

Tool 3 Venn Diagram

Tool 4 Envisaging future climate scenarios

Tool 5 Adaptation visioning

Tool 6 Mapping behavioural changes

DEVELOPING OUTCOME STATEMENTS: AN EXAMPLE FROM NEPAL

VISIONING HIGH ADAPTIVE CAPACITY: Having explored climate change impacts, local vulnerability and existing ways of responding, the community did an exercise to imagine what high adaptive capacity in their household (and their community at large) might look like in 20 years' time. Individuals called out their ideas (outcome statements), which the facilitator wrote down on cards. These were then clustered and compiled to provide a series of criteria (or indicators) against which the community and other stakeholders will later evaluate the effectiveness of the local adaptation planning process (LAPA).

OUTCOME STATEMENTS: The following outcome statements were formed by the community; others were developed for each indicator area.

- Every household carries out new activities that generate income.
- Every household has safe drinking water close to their home and the supply system is protected from landslides.
- There is a health post within one hour's walk (with medicines and qualified staff).
- There is a suspension bridge.
- Every household is aware of information about climate adaptation, government/NGO facilities and income-generating options.
- People grow many new crops and crop varieties that can thrive in different climatic conditions.
- All houses and land are protected (as far as possible) from landslides and floods.
- The community is prepared for disasters and has planned different options to cope and adapt.

Yet, these statements can mean different things to different stakeholders, so agreement must be reached on the detail. For example:

<p>First draft of statement</p> <p>Every household has safe drinking water close to their home and the supply system is protected from landslides</p>	<p>Viewpoint of local government</p> <p>Drinking water taps should be provided within 100m of every home, with pipes buried in the ground.</p>	<p>Viewpoint of mother and child group</p> <p>Drinking water taps need to be in a central location, which is safe for women to access. They need to be less than 30m from each home.</p>	
<p>People grow many new crops and crop varieties that can thrive in different climatic conditions</p>	<p>Viewpoint of ministry of agriculture district office</p> <p>Farmers are given training on suitable crops and seed merchants stock the seeds</p>	<p>Viewpoint of farmers' group (men)</p> <p>Men are trained to grow new kinds of cash crops that will be resilient to changing conditions, and for which there will be a good market.</p>	<p>Viewpoint of women farmer's group</p> <p>Women are trained to grow food crops that will survive reduced rainfall and occasional floods, and the varieties yield seed that can be saved (to avoid the cost of purchase)</p>

Outcomes need to be prioritised in line with the change that the particular CBA project is focusing on. If there is a project logical framework, this will help provide the outcomes. These will have been agreed during the project planning stage, which may have been participatory, or may have been carried out by project staff with a limited consultation process. Where there is a logical framework, then ideally outcome statements become indicators in the framework. If the logical framework is already fixed, then the findings from stage 4 of PMERL (Evaluation through learning, reflection and feedback) can be fed back to the project team for inclusion in the formal M&E process.

In this step participants should be encouraged to think about outcome statements that fit the project objectives. The PMERL team can help by clustering outcome statements into similar types. Stakeholders should decide between themselves how each outcome cluster can be best described. Between three and six outcome areas are useful. Here are some examples:

- Existence of services and resources to support adaptation
- Services and resources to support adaptation are accessible to the most vulnerable groups
- Well-being (e.g. people have adequate nutritious food, homes are weather-proof)
- Adaptive behavior outcomes (e.g. people are growing new crop varieties that will be more suited to the expected changes in climate, people are moving to live beyond a flood plain).

KEY QUESTIONS TO TACKLE

- What does 'high adaptive capacity' look like for different stakeholders?
- Are there outcome statements for each 'outcome area'?
- Do outcome statements reflect the priorities of the most vulnerable and marginalised women / men / boys / girls?

B) INFORMATION ON PRACTICE

Adaptation involves behaviour change and improved access to information and resources of different kinds. The PMERL process seeks to find out what members of a community, service providers and others are doing differently, how CBA initiatives are enabling these changes in behaviour and whether this helps community members and local institutions to respond effectively to climatic stresses and changes in the short and long term.

KEY QUESTIONS TO TACKLE

- What are the key activities in the CBA project plan or action plan? When should they be undertaken and by whom? (This information can be found in the CBA plan.)
- What behaviour change can be measured and how?
- How many people are reached by the CBA activities and who are they? How can it be shown that they are benefitting?
- Have the most vulnerable and least powerful groups been included?
- Is some of this information already being collected? How can it be built on?

The community monitoring team should fill out a Progress Monitoring Table (see example below). All of the activities in the CBA plan need to be entered into the table. The team should discuss what is working and what is not, and include any issues that can be addressed by revising CBA plans. The progress monitoring table makes allowances for what is planned, and what *actually happens*, because circumstances, needs and capacities of both service providers and vulnerable groups will change over time.

TABLE 2: A PROGRESS MONITORING TABLE

Activity	Undertaken by whom?		When?		Who benefits and how? (Note number and make-up of those community members participating in the project, e.g. number of women, number of 'ultra poor,' noting overlaps)		Any unanticipated impacts?		Adjustments in the plan	
	Planned	Actual	Planned	Actual	Planned	Actual	Positive	Negative	Adjustments to meet shortfalls	Adjustments to respond to opportunities
					Number of people Composition How did they benefit?	Number of people Composition How did they benefit?				

C) INFORMATION ON THE CONTEXT

So far, this section has explained how to develop outcome statements based on information about process and results. Helping to limit the adverse impacts of climate change on a community is the primary reason why CBA projects are undertaken, and climatic shocks and stresses during a project may clearly affect the implementation of a CBA project itself. Other factors are also likely to change and impact on people's livelihoods, so the PMERL team will need to reflect on those factors which are relevant to their community's individual situation and decide how to monitor them.

But it's also important to be aware of the kinds of ecosystems people depend on, and what changes they are already observing and why. Recording changes in climate and ecosystems will help people to recognise trends and respond to them. The frequency of monitoring will depend on the type of information being collected. Rainfall measurements can be recorded daily, weekly or monthly depending on what is most relevant and practical. On the other hand, information about the changing populations of certain wild plants important for animal grazing may only be monitored annually.

Not all observed changes will be due to a changing climate directly; some will be due to human activity, such as deforestation, and others will be due to a combination of climatic and human factors, such as landslides caused by extremely heavy rain falling on land that has been deforested. A seasonal calendar (Tool 8 in the Annex) helps people to understand how changing rainfall patterns can affect their lives and livelihoods.

There are many factors other than climate itself that will influence vulnerability and the effectiveness of adaptation. Many of these will have been identified during the CVCA. The PMERL team should select two or three factors to monitor that are of particular importance. For example, high food prices may affect food security for some groups in the community, so these prices in the local markets might be one key factor to monitor. Quality of service delivery, or the relationship with government and non-government stakeholders, may be important issues which the community may like to monitor. If local political unrest means people don't have access to local services, the local political situation might be another issue of interest. Over time, priorities may change. Monitoring meetings provide an opportunity for decisions to be taken to monitor other factors as well. However, it is really important to monitor the trends of *the most important factors* over a long enough period.

KEY QUESTIONS TO TACKLE

- Which climate changes and hazards are identified by project beneficiaries as impacting on their lives and livelihoods? (e.g. rainfall, drought, storms)
- What other changes matter to the community? (e.g. volatile market prices, conflict, government accountability)
- What ecosystems do people depend on? How are these affected by climate-related hazards and trends? (e.g. forests, wetlands, particular plant or animal species?)

STEP 2.3: DEVELOPING INDICATORS

Once outcomes are decided, a process is needed to measure progress towards meeting them. This is done through indicators. Outcome indicators are measurable or tangible signs that something has changed. Indicators can be quantitative or qualitative.

Quantitative indicators are represented by a number – for example ‘number of people with access to water during drought.’ This example, and any indicator measuring numbers of people can be further gender-disaggregated, for example: ‘number of women/men/boys/girls with access to water during drought.’

Qualitative indicators will give information about the ‘quality,’ ‘extent’ or ‘level’ of change, for example to measure changes in attitudes or awareness to climate change. This information can be obtained through focus group discussions and stories of change, see Annex, Tool 5.

Information on quantitative indicators is easier to collect, and also to map showing the trend of change (in rainfall, or crop yields for example.) Qualitative indicators are important to help describe change. PMERL methods are mainly about identifying the qualitative changes that the project is seeking to achieve, and collecting information about those changes. The PMERL team will not need to carry out major quantitative surveys or measurements. However, there is a quantitative element to qualitative change – for example, how many people have adopted a certain type of behavior, or positive changes in people’s lives. An example might be the increased number of people that are able to afford school fees due to having additional sources of income.

Indicators need to be developed for every outcome. People should be asked to suggest indicators working in small groups. For each outcome, people need to identify the indicators that will help to answer the following questions:

- How will we know that change has happened in this outcome?
- How will we know success when we see it?

The indicators can then be ranked with the community following a discussion around the following questions:

- What information will tell us most about the outcome?
- Which indicators reflect the needs of more than one stakeholder group?
- Do we have indicators that can tell us whether the change in outcome reaches women / men / boys / girls appropriately, and in particular the poorest and marginalised groups? If not, how could an indicator be adapted to do this?
- Which indicators can be easily measured at the community level?
- Is there a mix of quantitative and qualitative indicators for each outcome?
- Are there indicators to measure changes in inequalities over time – to measure, for example, gender and socio-economic gaps in access to land, extension services, education, ecosystem services, etc.? Much of this information will be qualitative, such as numbers of women successfully obtaining advice on agricultural matters, which can be obtained from official records. However, some will be qualitative, and only obtained through more subjective methods such as focus group discussions or interviews.

Finally, the shortlist of indicators should be presented to all groups, and a final set negotiated. It is important that the indicators are meaningful to those who require the information (see Step 1) and those who will be collecting the information (see Step 3 – developing indicators). Indicators should be selected based on local knowledge and experience. However, it is also important to complement the local knowledge gathered by community members with scientific data, particularly related to projected climate changes, to prevent the risk of planning for *current* climate change only.

Indicators may need to change as the CBA process evolves. Every time there are changes to indicators, the monitoring table (see Table 2) will need to be updated and the change recorded. ‘Are we achieving what we set out to achieve?’ is the critical question. All monitoring plans should be dated and stored with a document that records the changes made. It is also important that clear records are kept in order to justify changes in the CBA project plan to stakeholders (including donors) and because it demonstrates competent and adaptive management.

SUMMARY OF KEY QUESTIONS ON INDICATORS

- Which are the indicators that tell us most about the outcome?
- Which indicators reflect the needs of more than one stakeholder group?
- Are there any indicators that provide information about whether the change in outcome reaches the poorest and most marginalised groups including women?
- Do any indicators need to be adapted or changed over time?

USEFUL TOOLS

Tool 4 Envisaging future climate scenarios

STEP 2.4: MEASURING BASELINES AND ASSEMBLING INFORMATION

Once indicators have been developed, the ‘baseline’ for each indicator needs to be recorded. **Baselines are the first measurement of each indicator**, the starting point from which subsequent change will be measured. They answer the question ‘where are we now?’ Setting baselines is ideally done in the project planning stage, but it may be done at the start of a CBA project or the start of the implementation of a community CBA plan. The baseline information and methodology must be well documented so that future comparisons can be made.

To record baselines for **quantitative** indicators:

- Measure or count the indicator at the starting point (e.g. there are six water points). Mapping (see Tool 6) and visual tools (see Tool 7) are a useful way of adding meaning to quantitative indicators. A graph or trend line can be developed using historical data where available.

To record baselines for **qualitative** indicators:

- Build a picture of the current situation. Interviews and focus group discussion are a useful way of doing this. Encourage participants to think about the outcome they would like to see in the future, and then assess the same issues in the current situation. Tool 5, Adaptation Visioning, is useful here and an example is presented in below:

SETTING BASELINES FOR QUALITATIVE INDICATORS: EXAMPLE OF 'VISIONING' APPROACHES FROM THE NEWAH LAPA PILOT, NEPAL

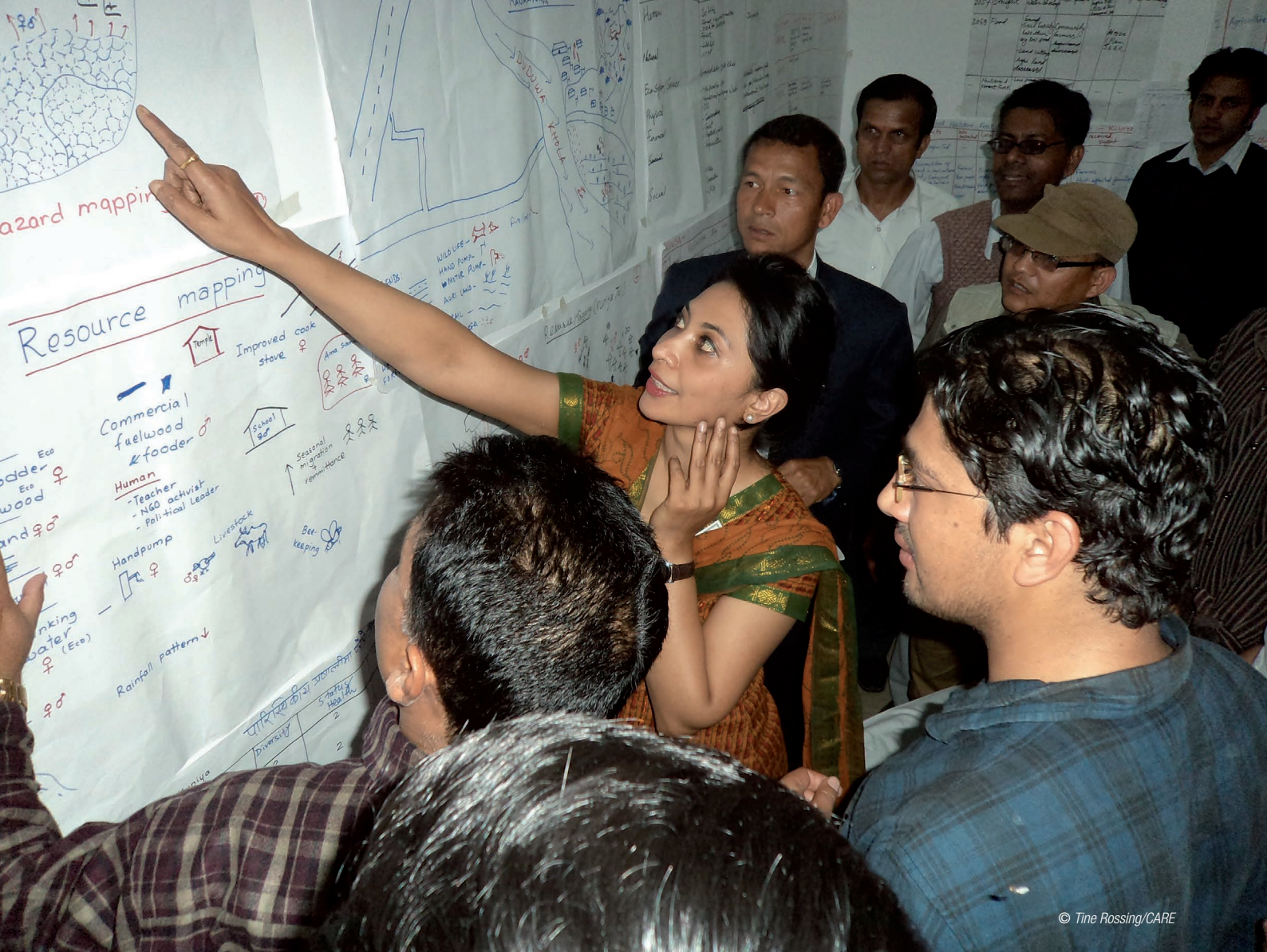
The community assessed their current status with regard to each criteria / indicator using a four-point scale. The scale was represented as phases of the moon, with a new moon representing beginnings and a full moon representing a situation that had reached its potential. This set a baseline against which both targets and future progress can be measured.

Aspects of vision (indicators)	1 New moon	2 Young moon	3 3/4 moon	4 Full moon
Reliable source of safe drinking water		X		
Income-generating activities	X			
Health post nearby and staffed				
Suspension bridge				
Vehicle road				
Awareness and information on a range of opportunities	X			
Electricity for mill and light				
Crop diversification	X			
Cheap loans from within the group				
Homes and land safe from landslides and floods	X			
Different options to cope with disaster		X		

Sometimes baseline data may need to be added later, when a new or different indicator emerges as important. That means collecting as much information as possible about what the situation was like before the CBA process began. Sources for this information may include:

- Data about the particular indicator that may have been collected for other purposes, in written records or other sources such as meeting minutes.
- Anecdotal information using methods such as interviews and focus groups to ask people when and how much things have changed.

The approach of mapping behavioural change (see Annex, Tool 6) is a useful exercise to undertake with different stakeholder groups.



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USEFUL TOOLS

- Tool 5 Adaptation visioning
- Tool 6 Mapping
- Tool 7 Visual documentation
- Tool 8 Timelines and seasonal calendars

STEP 2.5: PUTTING THE PLAN TOGETHER AND MATCHING IT WITH THE RESOURCES AVAILABLE

The table below is an example of the information that needs to be gathered and how it can be presented.

TABLE 3: PART OF A PMERL FRAMEWORK SHOWING EXAMPLE BASELINES

Outcome	Outcome indicators (answering the question – where are we now?)	Baseline (answering the question – where were we before?)
Example outcome Area 2: Households are employing climate resilient agricultural practices		
Households are producing crops that are resilient to climate hazards	% of households growing crops that are resilient to climate hazards affecting the target area (e.g. drought resistant varieties)	No households growing crops that are resilient to climate hazards affecting the target area.
Households are practising conservation agriculture	% households using conservation agriculture practices	No households using conservation agriculture practices
Households are employing a mix of different agricultural livelihoods	% households with who have diversified into other agricultural activities	10% households have two agricultural income sources
	% households with three or more different income sources from agriculture	5% households have three or more different income sources
Tracking context		
Climate events	Number of days of flooding	Number of flood events between 1960-2010
Environmental factors	Availability of a valuable grazing species	Population change of this species over last 50 years
Social/economic factors	Price of maize in local markets	Price of maize over last 20 years

To finalise the monitoring plan, the PMERL team will need to agree who will monitor the changes against baselines and how. The monitoring plan will be more manageable and more sustainable if it uses information that is already being collected, and if the type of information collected is mapped at the beginning of the process and can be used by the target groups (who are represented by the PMERL team).

The final plan should be developed with sub-groups of stakeholders, and seek commitment to monitor and evaluate the indicators which are of most interest to them. Everyone must understand the time and resource costs of collecting the information, as well as who will store it, and how it will be used, to ensure the PMERL plan is sustainable. These important questions are considered in Section 3 below. The facilitator may need to help the team answer the following questions:

- Are the people who will use the information (the PMERL team, the project team, and possibly external stakeholders) able to measure the desired indicator with enough accuracy?
- Can useful information be obtained at a relatively low cost?
- When is the best time for collecting the information (e.g. after harvest)?
- Can the information be used with minimal training by the stakeholders doing the documenting?
- Are there institutions in the community that could be engaged in monitoring changes and feedback? This could help build longer-term more sustainable monitoring systems.

On the last point, for example, schools may be able to take part in collecting information. This would build pupils' capacity with resources and knowledge to monitor changes, and encourage regular feedback to the wider community. Since schools are permanent institutions, such an approach can also help build longer-term sustainable monitoring systems.

The template table below can be used to prepare a plan with the PMERL team to check that all of the information required has been identified and that the correct people or groups have been assigned to collect it. Preparing the monitoring plan will involve a time investment from members of the PMERL team and from others. The cost of preparing the M&E plan must be calculated in advance so that adequate time can be found and resources budgeted, including the time investment required of people involved on a voluntary and unremunerated basis, to ensure transparency. CARE has a project budget checklist that can be used – see the references at end of this manual.

TABLE 4: EXAMPLE OF THE OUTCOME AND CONTEXT MONITORING PLAN OF INFORMATION

	Example	Source of info	Who will use the info?	Method of collection	Frequency/timing of info collection	Who is responsible for info collection?	Who is responsible for analysis?	How will the info be documented and stored?	Costs of collecting this information	Who should receive the information	Frequency/timing of feedback
Outcome Area 1	25% of households using conservation agriculture methods	CBA Project team; farmer groups (women's and men's)	PMERL team	Household interviews, field observation	Quarterly	PMERL team working with project team	Project team	Project files; PMERL team file		All farming households; agricultural department; farmers' groups	Quarterly
Outcome Area 2											
Outcome Area 3											
Climate Trend info											
Climate Trend info	Rain 5% less than 10-year-trend this quarter	Local met. office; rain gauge at school	PMERL team	Met officer; teacher/PMERL team	Daily	Met officer/PMERL office	Met office/CBA project team	Met office, school		Community	Quarterly

While the table above is useful for checking that all the information required for monitoring is being collected, the findings must be presented to the wider community in a manner that is clear and easily understood. This could include photos, maps, diagrams, timelines and short journals or stories of change from different people or groups. Tools 5, 6, 7 and 8 in the Annex may help.

STAGE 3: INFORMATION ANALYSIS

Once the information for monitoring has been collected, as discussed in Step 2 above, it must be analysed. For this stage, the PMERL team will need to work with the CBA project team, providing them with the information collected in stage 2, and agreeing how they would like it to be analysed. The Annex offers some tools that can be used in analysis.

For example, rainfall data can be analysed to show the trend in annual rainfall, the number of days when rainfall exceeded a certain level, and the days on which there was no rainfall, and Tool 8 offers a range of options for collecting this information. The PMERL team must agree what kind of analysis will be most useful when it comes to linking rainfall data with project outcomes.

The cost of collecting information can be high, as described above, and especially for those on the PMERL team. Project staff must ensure, in liaison with colleagues, who will help analyse the information, that the resources available for analysis tally with the information that is being collected. If resources are limited, then it is important not to waste people's time collecting more information than is required. Analysis, which requires desk-based skills and some statistical ability, would normally be carried out by project staff, and involves putting the data into table or graph format and assessing changes that are significant. It also involves assessing whether the changes are in line with what the project seeks to achieve. Often it is helpful to draw a series of charts to show the changes visually, which helps to compare new data with baseline information. It will be important to consider changes in the context of the monitoring period, as this may have influenced the results (for example an extreme weather event.) Analysis should help to answer the following questions:

- What changes are occurring?
- Would these changes – or the degree of change – have occurred without the project?
- Are the changes in line with project targets?
- How have changes in the context influenced results?

Role of community members in the information analysis process: Generally community members of the PMERL team are not expected to spend time on this stage. It is important that there is limited delay between information collection and analysis, and between the analysis stage and the evaluation stage discussed below. Long delays can mean the information becomes outdated and may not provide meaningful results. The information generated, and the analysis, also need to be shared with the people who have provided the information. The first step is to present the analysis to the community focus groups themselves to ensure that the conclusions drawn are correct. Next, the results should be presented to a wider community group and local organisations to facilitate dialogue on issues that have been raised by particular groups, which may also have implications for other groups. This can be done as part of the evaluation process in stage 4.

Use of the information beyond the PMERL process: The information that emerges from the PMERL process is valuable for organisations supporting CBA as well as meeting the learning and information needs of vulnerable communities. Beyond feeding into the next step of the PMERL process, it can also feed into the project's M&E system(s). Much of the information generated for PMERL will be subjective since it is designed to meet the needs of vulnerable people rather than external reporting, and will depend on the information to which they have easy access. However, PMERL provides a way for organisations, such as service providers supporting CBA, to account for change and engage in more responsive planning at the local level.

PMERL can help to bring some consistency to processes used across very different CBA projects, to inform learning around what CBA looks like and how it is best supported.

USEFUL TOOLS

Tool 6: Mapping

Tool 7: Visual documentation of PMERL

Tool 8: Timelines and seasonal calendars

NOTE:

Analysis will largely be done by project team staff, and information collected should be presented clearly. Tools 6, 7 and 8 will help.

STAGE 4: EVALUATION THROUGH LEARNING, REFLECTION AND FEEDBACK

STEP 4.1: QUESTIONS TO GUIDE EVALUATION

The PMERL process is designed to enable a participatory evaluation of the progress of a CBA project, which will help with:

- Informing and revising community adaptation planning processes
- The revision of the CBA project plan so that it delivers its objectives more effectively
- Informing the project's M&E system

The participatory evaluation, learning and reflection stage of the PMERL process seeks to answer the following questions:

- What is working well? What is not working well?
- Do we need to do anything to adjust our plans in light of changing contexts?
- How can we improve our practices to adjust to changing circumstances and contexts?
- What needs to change?

STEP 4.2: MEETINGS FOR EVALUATION, REFLECTION AND LEARNING

The most effective way of carrying out this evaluation is to hold regular (probably quarterly) feedback meetings with all stakeholders, providing an opportunity for different groups to discuss findings and what they mean for effective CBA planning. An example of this approach is presented below.

CLIMATE CHANGE PREPAREDNESS WORKSHOPS BY INDIGO

The Community-based Climate Change Adaptation in Africa (CBAA) programme implemented by the NGO INDIGO (www.indigo-dc.org) uses periodic Climate Change Preparedness Workshops for farmers and other stakeholder across different CBA projects involved in the programme. Workshops are conducted every three months, providing a platform for reporting back on CBA project findings to the larger community, to share ideas between farmers and scientists, and to plan next steps. The workshops fulfill several needs and are also social events to exchange personal and farming news and experiences outside the formal programme. Designing workshops in this way enables participants to satisfy their information needs, including a need for understanding and learning, and their need for inclusion and identity, a crucial part of helping to maintain the momentum of the process.



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The quarterly reflection meetings are the most important part of PMERL. Information on which the participatory evaluation will be based must be presented in a way that is clear, understandable and not overwhelming in its quantity. Presentations must be brief enough to allow time for the important stages of evaluation and reflection. They must be well prepared. Some guidance for holding these meetings is given below. More details are included in CARE’s CVCA handbook – see references.

It is important that all stakeholders involved in designing the PMERL strategy (those identified in Step 1 of Section 2) are present at the quarterly reflection meetings. This will include representatives of the most vulnerable groups, through to service providers responsible for facilitating CBA plans and in a position to support CBA with resources. This provides an opportunity to make certain groups in the community aware of the views of particularly vulnerable groups. There may be conflicts around the findings, particularly where they imply that more powerful groups are increasing the vulnerability of other groups. Facilitators must be aware of this and take steps to resolve them. Facilitators must also do all they can to ensure that there are no negative consequences for people who share views that may differ from those in positions of power or influence.

The voices of the most vulnerable groups can be lost in larger meetings. To ensure they are heard, it may be necessary to hold a series of smaller meetings facilitated by the PMERL team with different livelihood and gender groups *before* the reflection meeting. These can be focus-group type discussions that should take less of people’s time and resources. Questions should cover all three types of information and need to be phrased so they are relevant to the group in question. For example:

- How satisfied are you with the activities that have been undertaken during the CBA project? What has gone well? What could be improved?
- How do changes in indicators of adaptive capacity relate to your group? Which changes matter and to whom?
- What do changes in climate trends and ecosystems mean for you? Are women/men/boys/girls responding to these changes? Are the most climate-vulnerable groups responding? How? If not, why not?

The PMERL team should work with each group to agree key messages around each type of information. The team will then present these messages to the larger multi-stakeholder reflection meeting for discussion.

STEP 4.3: INTEGRATING THE PMERL PROCESS INTO DECISION-MAKING

It is vital that the outcomes of the PMERL process are integrated into local CBA planning and decision-making. This also ensures that participants are able to see that their time spent in learning and reflection have played a useful role in influencing the CBA planning process, e.g. around the ongoing project plan or community adaptation plan. First and foremost, if the CBA project has a parallel M&E system and process then findings from the reflection meetings should be integrated, to help inform future decisions on the project’s direction.

As mentioned earlier, there will be situations where the CBA project generates the planning process leading to a community adaptation plan, and other cases where there is already a community adaptation plan in place, and where PMERL supports the actions derived from the original plan. In other situations, the community may be preparing an adaptation plan that it hopes to feed into a local government plan. In all cases it is important to find out:

- **Who** is making the decisions?
- **What** information is decision-making based on?
- **How** can PMERL be integrated into this decision-making?

For groups within the community, how and when to integrate the information may need to be tailored to needs of different groups. For example, farmers have to plan in advance of planting seasons and may take up information informally through observation, and formally through farmer field schools. In this case, farmer field schools would be a good place to integrate information from PMERL.

With regards to formal systems, local policy-makers may have one-year, three-year, or five-year planning cycles, and decision-making may be informed by village or district level council meetings.

TABLE 5: EXAMPLE OF AN ‘ENTRY POINT’ ANALYSIS OF M&E INFORMATION FOR LOCAL ADAPTATION PLANNING DEVELOPED IN NEPAL

Community-based planning	District-level planning	Village-level planning
Community annual general meetings (twice a year) where feedback and review happens	District development committee has annual fiscal planning cycle & five-year planning cycle	Invite village council members to community meetings
Monthly community meetings	Six-monthly review and feedback of annual plans	Village council members included in the monitoring teams
Monthly reporting at community level	Joint multi-stakeholder monitoring teams exist at district level	Meetings with secretary and political parties at village level
Annual reporting to line agencies/joint review planning with line agencies	District climate change coordination committee planning cycles	Attend periodic sharing meetings at village level
Operational plans revised every 5-10 years	Public and social auditing	Annual village development council meetings

The information from PMERL also needs to be used to reflect on the PMERL process itself. As new information emerges about unexpected factors that are important in influencing change, or where change takes place at surprising rates, new indicators may need be added to the framework. Targets may also need to be evaluated and/or reset in light of changing contexts that makes certain goals more difficult to achieve. Stakeholders will also change as people move in or out of an area and as organisations come and go. Furthermore, some people will move out of the 'most vulnerable' category while others may move into it, particularly as indicators change. A review of the PMERL system should be undertaken once a year or whenever significant unexpected changes occur or new information emerges. The facilitator is well placed to work with the different stakeholders to understand and reflect changes back into the process, update it, and work with the CBA project team to ensure that the CBA plan reflects these changes.

ANNEX: TOOLS FOR PMERL

Project staff working on a CBA project will already have used many participatory tools that can be adapted for use in the PMERL process. Community members may also be familiar with using certain tools as participants. The tools presented below are likely to prove the most useful. It is assumed that information gained during the CVCA and CBA planning stages on wealth ranking and hazard mapping will also be available for the M&E stage, so tools for collecting this information are not included here.

CARE's CVCA handbook contains descriptions of other tools that might be useful in assessing whether vulnerability of certain groups has increased during the CBA project implementation, and the original PMERL manual contains a range of further tools.

Key questions to ask when selecting tools to use in preparing a PM&E plan are:

- What is being assessed or measured?
- Who will collect the information?
- Who will use the information and how?
- How much time, capacity and other resources are needed to use the tool?

TABLE 6: SUGGESTED TOOLS TO USE IN EACH STEP OF THE PMERL CYCLE

PMERL steps	Suggested tools/activities
1. Establishing a PMERL team	Community meeting
2. Planning and conducting a PMERL process	
Step 2.1: Mapping key stakeholders and desired outcomes	Tool 3: Venn diagram
Step 2.2: Deciding what to monitor	Tool 3: Venn diagram Tool 4: Envisaging future climate scenarios Tool 5: Adaptation visioning Tool 6: Mapping behavioural changes
Step 2.3: Developing indicators to show whether outcomes are being achieved	Community meeting Tool 4: Envisaging future climate scenarios
Step 2.4: Measuring baselines	Tool 5: Adaptation visioning Tool 6: Mapping Tool 7: Visual documentation of PMERL Tool 8: Time-lines and seasonal calendars
Step 2.5: Matching the monitoring plan with the resources available	Meetings between PMERL team and CBA project team
3. Analysis	Tool 6: Mapping Tool 7: Visual documentation of PMERL Tool 8: Time-lines and seasonal calendars Note: Analysis will largely be done by project team staff, and information collected should be presented clearly. Tools 6, 7 and 8 will help.
4. Evaluation, reflection, learning and adjusting the CBA project plan/community adaptation plan	Community meeting

GUIDANCE FOR HOLDING MEETINGS FOR EVALUATION, REFLECTION AND FEEDBACK

Well-run and well-facilitated meetings are crucial to all participatory work. It is important to manage expectations ahead of a large community-wide meeting. Such a meeting is a participatory process, and the outcomes will be determined by the contributions of those taking part as well as how much preparation time is invested by the facilitator and his/her team.

CREATE AND MAINTAIN A TRUSTING AND SAFE SPACE:

- Invite a trusted community member or local representative from the PMERL team to introduce other members of the team.
- Be welcoming and allow everyone to introduce themselves.
- Ask permission to record the proceedings, take photographs or video, and refrain if participants are uncomfortable.
- Ensure that the venue layout is conducive to participation; that everyone can see the presenters, and that they can see the participants.
- Develop ground rules with the participants.
- Explain the process and ensure that everyone understands what is expected of them.
- Allow time for participants to ask questions at each stage.
- Animate and balance participation.
- Support people who are timid, and gently silence those that take the floor too much or consider themselves “experts”.
- Value participants’ knowledge and experience.
- Find ways to allow people to drive the process (e.g. building maps themselves, marking symbols on the matrix).
- Ensure that you are moving quickly enough to cover the necessary ground in the time allocated. Allow participants to raise issues, but keep the process on track.

FINISH GRACEFULLY:

- Explain how the information generated in the meeting will be kept and used.
- Explain what the next steps are.
- Thank the group for their participation.

TOOL 1: SHARED LEARNING DIALOGUE⁵

Responding to climate change requires approaches that bring together global and local sources of knowledge. Both global scientific information and detailed knowledge of local contexts are essential to develop effective adaptation responses, and a way must be found to blend different kinds of knowledge. The shared learning dialogue (SLD) approach has been developed to do this. These carefully structured discussions need to be facilitated by individuals with strong, culturally sensitive communication skills who are experienced in using a range of participatory tools. Just as SLD is used in the development of the CBA plan, it is also useful for sharing information generated by monitoring and evaluation between the local and scientific communities. SLD can also be used regularly during monitoring to generate learning that feeds into future planning cycles.

The process requires participants that are willing to hear different viewpoints and are also willing to learn and accept that new knowledge may be useful. This can be demonstrated by participants listening attentively to speakers, asking questions, and listening respectfully to others' opinions, even if they disagree.

OBJECTIVE

To reach a point where all stakeholders have a broad and shared base of knowledge of issues that are crucial for the project which will enable them to reach agreement on courses of action. For example, community members may need to learn more about how climate change will affect their local area in the short and longer term (information which government scientists can provide). Farmers may need to learn which crops can withstand the temperature and rainfall patterns their location is likely to experience (information which agricultural experts can provide). Agricultural officers can also learn from farmers why the crops they traditionally grow are important to them.

PROCESS

1. Identify the key individuals and groups, including the most vulnerable groups and those with technical and scientific knowledge that need to be involved and the mechanisms for ensuring the voices of each group is heard.
2. Through discussion, allow each group to share their understanding.
3. Facilitate the development of an initial level of understanding about what is relatively well known, such as changes in temperature, and about the uncertainties surrounding other changes that may occur.
4. Focus on specific areas of concern or areas where understanding is particularly weak.
5. Arrange for further meetings as required to develop a common understanding.

TOOL 2: CAPTURING BEHAVIOURAL CHANGE

This tool is used to monitor behavioral changes that can be linked to CBA interventions and that contribute to increased adaptive capacity of communities. Since changes in behaviour often develop slowly, and as it takes even longer to see their impacts, these changes will probably not be captured every quarter.

PROCESS

1. Stakeholders with a good level of literacy are encouraged to keep a journal to record changes in their own, their organisation's or their group's behaviour.
2. For groups who are not able to record this information for themselves, arrange a discussion to help people recognise behaviour changes. Facilitators and community groups should keep a short written record of any events or changes related directly or indirectly to the indicators that the project's key

⁵ This tool was developed by ISET. See 'The Shared Learning Dialogue: Building Stakeholder Capacity and Engagement for Resilience Action.' Climate Resilience in Concept and Practice: ISET Working Paper 1. www.i-s-e-t.org

- target group (i.e. the poorest and most vulnerable households) are hoping to see.
3. Note any surprising or unanticipated outcomes that can inform learning around CBA and feed these back into planning cycles.
 4. Where there has been observable behaviour change, the facilitators and groups should reflect on the changes recorded (and on the lessons identified) and on any programme changes that may be appropriate.
 5. These accounts of behaviour change should be shared with the wider community at review meetings (not more frequently than every six months) and amendments made to adaptation interventions to encourage or influence further change.

TABLE 7: CAPTURING BEHAVIOUR CHANGE

Actors (Key individuals, groups or organisations)	Behavioural changes (In behaviour, relationships, policy, knowledge-base and access to information) These are outcomes.	Progress markers (Incremental indicators of change in behaviour)	Evidence of change (Means of verification for each progress marker)
Actor 1	Behavioural change outcome 1		
	Behavioural change outcome x		
Actor 2	Behavioural change outcome 1		
	Behavioural change outcome x		

Note: This can be done by community groups or from the perspective of a facilitating organisation. The views of both are relevant.

One aspect of capturing behavioural change is called the Most Significant Change technique (MSC) and has two key elements. The first is the collection of stories of significant change in adaptive capacity from some of the most poor and climate-vulnerable women, men, boys and girls. The second is the systematic selection of the most significant of these stories by actors at different levels in the CBA planning and funding processes, the most marginalised and vulnerable people, through community organisations, local-level committees, NGOs, and district-level committees. In this way, local and district decision-makers can gain a sense of which impact has resulted directly from community-based adaptation.

The tool is complementary to other tools. It has also been called ‘monitoring-without-indicators’ because it answers the central question about changes in adaptive capacity through stories of who did what, when and why.

The first step is recording the stories in writing, or through video or voice recording, by asking:

- What is the most significant change since the adaptation intervention began?
- Why is this change significant for you?

The facilitators then identify the key actors in CBA development who need to know the impact of adaptation planning and interventions. This should include decision-makers at any level, whether community, local, regional, or national. Initially, the facilitators arrange for a small group to meet and consider the significant change stories collected. Each member of the group is asked to choose one and explain why they think it is the most significant story. Lively discussion deepens understanding of issues surrounding the intervention in particular and local adaptation in general. At the end of the meeting, the group agrees on one most significant story and explains why they have selected it. They may also agree on the actions they will take to reinforce successful elements and address undesirable outcomes.

TOOL 3: VENN DIAGRAM

OBJECTIVES

- To understand which institutions are most important to communities
- To analyse engagement of different groups in local planning processes
- To evaluate access to services and availability of social safety nets

This activity should take approximately 1.5 hours. One hour is needed to complete the diagram, and 30 minutes are required for discussion.

PROCESS:

1. Either draw and write with a stick on soft ground or work on paper. If you decide to use paper, people should write in pencil so changes can be made if needed. Another option is to cut circles of different sizes from coloured paper and let participants decide which size of circle represents each institution.
2. If people find it difficult to understand this tool, it may be helpful to draw a simple example.
3. Ask the participants which organisations/institutions/groups are working with them, whether present in the village or outside it. Encourage them to think about informal groups and community-based organisations too.
4. Write down all of the institutions that are mentioned and give each organisation a symbol that everyone can understand.
5. Ask the participants to draw a big circle in the centre of the paper or on the ground to represent their group or community.
6. Ask the participants to draw important institutions or organisations as big circles and the less important ones as smaller circles. Ask the participants to compare the sizes of the circles and to adjust them so that the sizes of the circles represent the relative importance of the institution, organisation or group.
7. Every organisation / group should be marked with the name or symbol.
8. The degree of contact / co-operation between the community members and institutions is shown by the distance between the circles. Institutions with which they do not have much contact should be placed further away from the community circle. Institutions that are in close contact with the participants, and with whom they co-operate most, should be placed inside their own circle.
9. Ask people to discuss in which way they benefit from the different organisations.
10. Ask them to describe how important each organisation is to them.
11. When the diagram is complete, ask the group members the following questions:
 - Do any of the organisations shown provide privileged access to men or women?
 - Are there any other groups that are excluded from working with or using the services of the organisations identified?
 - Do any of the organisations offer support in times of crisis?
 - How do you receive information from the different organisations?
 - How do you communicate with the different organisations?

The note-taker should carefully transcribe the key points raised during the discussion.

A VENN DIAGRAM CREATED AS PART OF A CVCA TRAINING EXERCISE IN KENYA



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TOOL 4: ENVISIONING FUTURE CLIMATE SCENARIOS AND IMPACTS OF CLIMATE CHANGE

Given the uncertainty of climate change effects on a particular locality, envisioning the range of impacts which communities may experience in the short and longer term helps vulnerable groups understand what may lie in store.

OBJECTIVES

To help local communities and service providers understand how local adaptation planning needs to take account of future uncertainty. To provide information for baselines and inform reflection and learning towards increasing adaptive capacity.

PROCESS

1. A facilitator with a clear understanding of what is known about climate change and the areas where projections are highly uncertain guides the process.
2. The community clarifies time horizons. It is suggested that they anticipate changes and impacts over the short term (up to 5 years), intermediate term (up to 15 years) and long term (up to 30 years).
3. Draw a table to help describe the changes in a systematic manner, with four columns for time horizons, and rows relating to key climate conditions in different seasons. The parameters that are best known and most easily predicted (and which are relevant for the location) such as temperature, snow line, or sea level rise are listed first. Areas where uncertainty is high, such as precipitation, changes in storm intensity, or frequency of floods, are placed in later rows. Each cell of the table is filled in with information from both relevant scientific information and local perceptions. An example is given below:

4. Ask people to envisage different scenarios in terms of livelihood options or likely events. For example, if precipitation is expected to change but uncertainty is high, three scenarios might be considered reflecting a large decrease, a large increase, and no change in precipitation, and the impact on agriculture and infrastructure (such as roads, bridges, water supplies).
5. Ask participants to consider the possible impact of each of these scenarios on local people of different gender and age, and different socio-economic or livelihood groups, and on their livelihoods, environment and the social systems on which they depend. 'What if' questions can stimulate discussion.
6. Draw pictures or maps to illustrate impacts.
7. Help people to identify areas where impacts on one system could affect another; for example if electricity generation is vulnerable to floods, then that will affect pumped water supply as well as any lighting systems.
8. Any vulnerability in basic systems under different climate scenarios becomes the focal point for community discussions around options for adaptation planning at community or district level (i.e. baseline and targets).
9. The scenarios are periodically revisited (not more frequently than annually), in light of local experience and new scientific information.
10. Reflection and learning feeds back into immediate planning and revision of the main scenarios.

TABLE 8: DESCRIBING EXPECTED CLIMATIC CHANGES

Climate Parameters	Short term (5 year)	Intermediate (15 year)	Long term (30 year)
Winter			
Temperature	Noticeably milder winter temperatures	Higher average temperatures regularly observed	Clear trend of warmer winters
Snow line	+500m average and melts faster	+1,000m average and melts faster	+1,500m average and melts faster
Storm frequency	More variable +-?	Uncertain	Highly uncertain
Rainfall	More variable +-?	Very variable?	Highly uncertain
Summer			
Temperature	Noticeably higher peak temperatures on several occasions	Higher peak temperatures regularly observed	Clear trend of rising temperature and more frequent peak temperatures
Snow line	+1,000m average and melts faster	+1,500m average snow disappearing from peaks	+3,000m average no snow visible
Storm frequency	Hot dust and thermal storms increasing	Many hot dust storms now occurring, intense cloud bursts common	Very windy and turbulent on hot days. Very intense thermal storms
Rainfall	Very variable?	Highly uncertain	Highly uncertain

TABLE 9: AN EXAMPLE OF SCENARIOS AND IMPACTS

Climate parameter	Scenario	Effects	Impacts on local people and environment (Consider including separate columns for impacts on food security, core systems, services, infrastructure)
Monsoon rainfall	Low volume	Reduced soil moisture, dry spells, low stream/river flow.	Crops fail; people hungry. Springs dry. Forest fires. Micro-hydro fails.
	Same volume, more erratic, high intensity	Dry spells, greater run-off, reduced infiltration, floods, river scouring, landslides.	Crops under stress, at risk of drying out and vulnerable to pests and disease, soil erosion, loss of land and other assets, loss of life, damaged infrastructure.
	Reduced timeframe (Delayed onset and/or early finish)	Shortened growing season.	Rice seedlings over-mature in nursery beds, delayed planting, crops do not mature.
	High volume	Flooding, river scouring, landslides, increased soil moisture.	Water logging of crops, crops susceptible to rotting and disease, crops unable to ripen. Damaged infrastructure. Better post-monsoon crops.

EXAMPLE: ASSESSING THE VULNERABILITY OF WATER SYSTEMS

Mapping the main water systems in an area includes rivers, springs, wells, irrigation canals, and village water systems. The current status of these systems is discussed in relation to the first column of the scenario table by posing the following questions: ‘How does the irrigation system function in a typical summer? Where is it functioning well? What are the problems?’ The reasons why a system functions (or not) are also explored by asking: ‘Is it due to a physical issue such as lack of water for irrigation, or a social issue such as caste/exclusion, or an institutional issue such as lack of funds for maintenance?’ This results in a clear picture of a) where the systems are strong b) where they are fragile and c) where they have clear points of physical or institutional weakness. This is followed by consideration of how the systems would respond under future scenarios across different time-scales. For example, asking: ‘How would the irrigation system function five years from now if it was 5° warmer and much wetter than at present during the summer?’ (and other related questions) can provide clarity as to how irrigation and other water systems will cope – and the challenges they may face – in the future.

TOOL 5: ADAPTATION VISIONING

Meaningful indicators of adaptive capacity can often only be identified and measured locally. This tool enables communities to use their vision of high adaptive capacity to inform adaptation planning by identifying indicators that are meaningful for them. The community must first have explored climate change impacts, local vulnerability and existing response mechanisms, using Tool 4, for example. This tool provides a good opportunity for social and gender groups to identify their ‘vision’, which will also provide interesting insights into social roles, priorities and power relations.

OBJECTIVE

To enable people to envisage a future impacted by climate change and how they will measure their capacity to adapt.

PROCESS

1. The group thinks about what life might be like in five to 20 years. They imagine what high adaptive capacity in their household and their community would look like.
2. Individuals call out their ideas and draw them on cards which are compiled to form a collective vision.
3. These ideas become the criteria (or indicators) against which the community and other stakeholders evaluate the effectiveness of their adaptation efforts. It's a good idea to represent the indicators as pictures, so less literate members are fully included.
4. The discussion during this process clarifies perceptions and helps the community arrive at a common understanding, required for later evaluation.
5. The indicators are arranged in a matrix and scored on a four-point scale (for example, phases of the moon, with a new moon representing the beginning and a full moon showing something has reached its full potential, or a jug that is empty, quarter full, half full, etc.). The assessment of current status (perhaps showing low capacity) effectively stimulates discussion and sets a baseline for targets for the next round of planning.
6. The most important indicators to be monitored can be ranked in terms of climate hazard priorities and availability of resources.
7. If this process has been carried out with small common-interest groups, or gender groups, for example, the indicators and status assessments from each group are then combined during a large community meeting with further dialogue.
8. Indicators are reviewed for overlaps and omissions, and quantified to make them easier to measure.
9. A first assessment by the group against their indicators provides a baseline. Later assessments lead to discussions about what the group has achieved, whether self-set targets have been met, and priorities for the next round of adaptation planning.
10. The groups periodically (commonly every six months or annually) monitor themselves against these indicators and reset their priorities, plans and activities.
11. The indicators and process can evolve over time to respond to changing local conditions and priorities.

TOOL 6: MAPPING

Maps and mapping processes are essential for many aspects of PMERL and CBA processes more broadly. Maps visually represent basic information such as population distribution, administrative boundaries, land use, natural resources, and infrastructure in a way that can be accessed rapidly. Maps can also provide a visual focus, which often helps when reflecting on progress made. The participatory process of mapping stimulates discussion and, through dialogue, participants can reach understanding and consensus. Mapping is used during a CVCA and often at the CBA planning stage. Revisiting these maps during PMERL is a valuable method of assessing progress.

OBJECTIVES

To enable communities to gain a clear picture of their current situation and of envisioned future scenarios, so that planning for change and monitoring it can be carried out effectively.

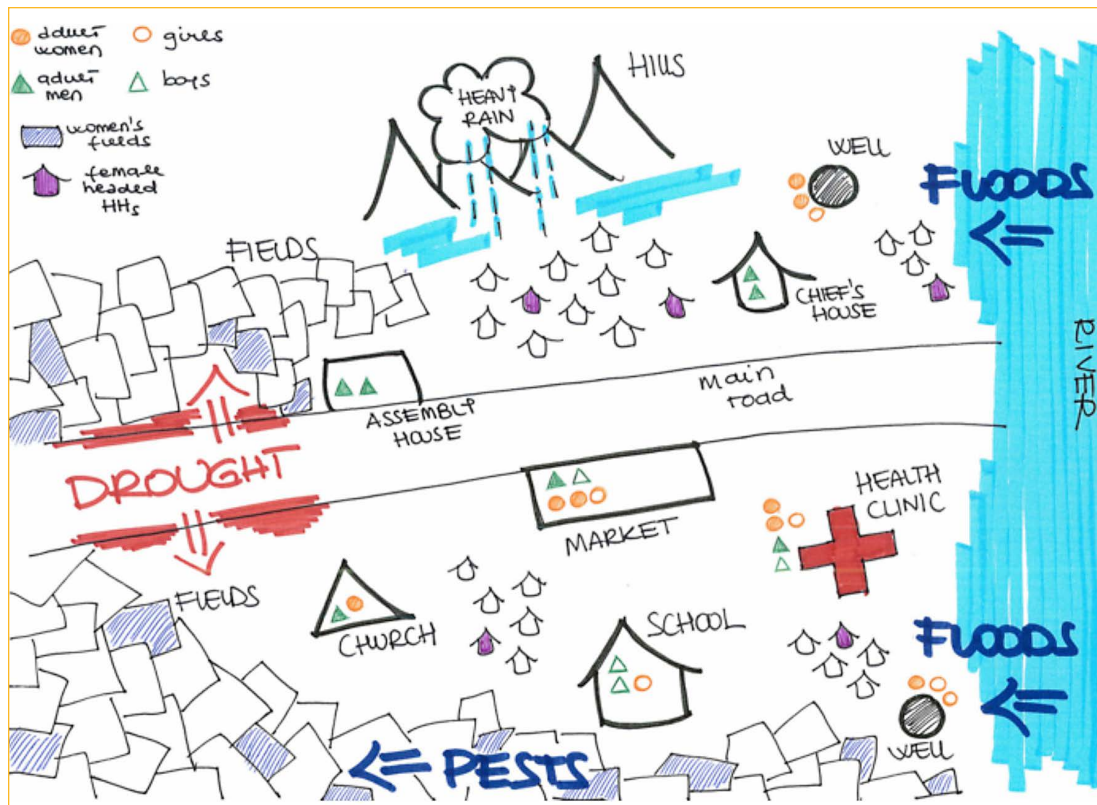
PROCESS/STAGES

1. **Vulnerability:** Use participatory sketch maps to identify where vulnerable households and communities live. Maps can highlight both physical vulnerability to climate impacts and hazards, and the social factors that increase that vulnerability.
2. **Visioning adaptive capacity:** After mapping the current situation, communities can then map what their vision of high adaptive capacity would look like (either on top of the current map, or separately). This vision becomes the long-term goal of adaptation planning and informs the setting of PMERL objectives and indicators. Steps made toward achieving the goal are mapped out and used to inform annual or periodic plans.
3. **Mapping environmental change:** Try to combine Geographic Information Systems (GIS) images with participatory sketch mapping which can show changes over time, including retreating snow lines or expanding areas affected by landslides. Such maps often help show variation in a way that is easily understood by communities and related to people's own experience.
4. **Social and gender relations:** Use agreed symbols (which indicate different social groups in a given community) to show access to certain resources, infrastructure or livelihood activities. Similarly, the impact of hazards affecting different groups in the community can be visualised in this way. This can be helpful when it comes to identifying strategies to reach (and include) the appropriate people in CBA programmes. The diagram below shows how this can be done for gendered access to resources.
5. **Visualising interventions:** Maps showing patterns of exposure to climatic variation and change can illustrate potential climate interventions for different scenarios to build adaptive capacity. In the case of water, for example, maps can be used to identify areas for watershed management, the construction of protective infrastructure, or points for strengthening water supply systems.
6. Maps are a basic tool for documenting the location of, and details about, actions to build resilience.
7. Mapping done by communities both directly (through the data on the map) and indirectly (through the discussions while preparing the maps) informs reflection about changes in adaptive capacity which should be fed back into discussions around planning and budgeting.



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FIGURE 5: AN EXAMPLE COMMUNITY HAZARD MAP SHOWING GENDERED ACCESS TO RESOURCES



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TOOL 7: VISUAL DOCUMENTATION

Photos and video footage can effectively capture situations, activities and impacts and help explain particular changes or concepts more easily than written text. Visual mediums are vital tools to engage with people who cannot read, or who speak a language other than that used for the written documentation. When photography and/or video is used within the PMERL process, we recommend the following steps to ensure both are used in a way that enhances learning and reflection for better local adaptation planning and implementation.

OBJECTIVE

To make, and keep, a visual record of the project situation and its progress as a means of communicating with all stakeholders during the PMERL process.

PROCESS

1. Plan: Decide which of the set baseline indicators are best and most easily represented visually, in coordination with the community group(s). Agree what type of visuals are needed to adequately show the topic. For example, if a community group wants to monitor a canal affected by drought, discuss and plan to photograph not only the canal, but the challenges it creates for people, and what the CBA activities seek to change (e.g. women walking long distances for water, health issues from lack of clean water, crop failure, etc.).

2. **Be effective:** Taking strong images can help the community understand, learn from and share information about their situation with others. Ensure the photographer has some training in how to capture effective images or video footage. Often the person/organisation who owns the photography/video recording equipment will facilitate. However, this step can also be more participatory through teaching community members how to operate equipment themselves.
3. **Process images:** Taking photos or capturing video footage is just one part of the process. Make sure to include time (and budget) to print the photos for community members, or to edit/share the film, and to store the images for future use on a hard drive. If the photos will also be used for funders or in NGO communications, be sure to add your name to the photo properties for copyright and credit information. Review the photos and/or video footage with the initial target group to check they have captured the intended content.
4. **Share:** Share the visuals with the community in the context of the PM&E process (at a workshop or meeting) using a laptop computer, prints, DVD player and a television.
5. **Review the images for monitoring purposes:** During the evaluation cycle, the images or video footage can be used to review how the situation has changed over time, and to help the community determine if the adaptation initiative is meeting agreed targets.

Video can be a powerful tool when it comes to capturing real life images but is less accessible than photography for many organisations, and when it comes to playing images back to a community, as more equipment is needed.

Video is only appropriate as a form of visual documentation for PM&E tool when project staff:

- Have the technical capacity to capture and edit usable video;
- Are able to use or acquire appropriate technology (for example, if you want to show the video at conferences, staff must have the ability to capture good audio with a microphone, and a high-quality camera that can do so);
- Have the technical capacity to train groups on an on going basis, as well as the wider community; and
- Have the budget required including for equipment purchase or rental cost, editing video footage, and showing/distributing videos.

Photography can be used to illustrate or capture stories of significant change – see Tool 2 above.

TOOL 8: TREND ANALYSIS THROUGH TIME-LINES AND SEASONAL CALENDARS

Examination of patterns and trends that (may) link to climate change is a key early step in the CBA process. Through presenting past weather or climate events as a time-line, trends and impacts can be noted, helping to raise awareness of climate change as a local reality. Seasonal calendars can be used not just to compare seasonal variation over a year, but also to compare a season in the past with the present season (making sure to compare the same type of seasons). Seasonal calendars therefore provide a baseline for indicators of adaptive capacity such as food sufficiency, income diversification, access to natural and other resources. They also provide relevant information for setting adaptation and monitoring targets. When carried out annually, they provide monitoring information that also informs reflective discussion. The **rain calendar** combines a historical time-line with a seasonal calendar and is designed to gather community perceptions of rainfall patterns, and to provide a platform for discussing risk management strategies to adapt to changing rainfall patterns.

OBJECTIVES

To explore how the community has reacted to, and coped with, climate hazards. Findings inform reflective discussion, while learning feeds into community adaptation planning.

PROCESS – TIME-LINE

1. Prepare a large sheet of paper with the time-line across the top and three rows below for impacts, individual/community responses and institutional support. (Wherever possible, symbols or illustrations are used instead of words beside each date.) It should cover the last 30 to 50 years.
2. Ask one of the senior members of the group to describe the earliest hazard event. Others join in and add detail as appropriate.
3. More recent events are added along the line, up to the present.
4. The facilitator brings climate change into the discussion and helps identify any trends over the time frame.
5. Discussion follows around the impact of each event, the community response and coping strategies, and the institutional support that was available at the time.
6. This information informs the adaptation targets set by the community and the monitoring targets.
7. Every year or so, recent climate events are added to the time-line. This leads to discussion about expected and unexpected changes and the effectiveness of strategies.

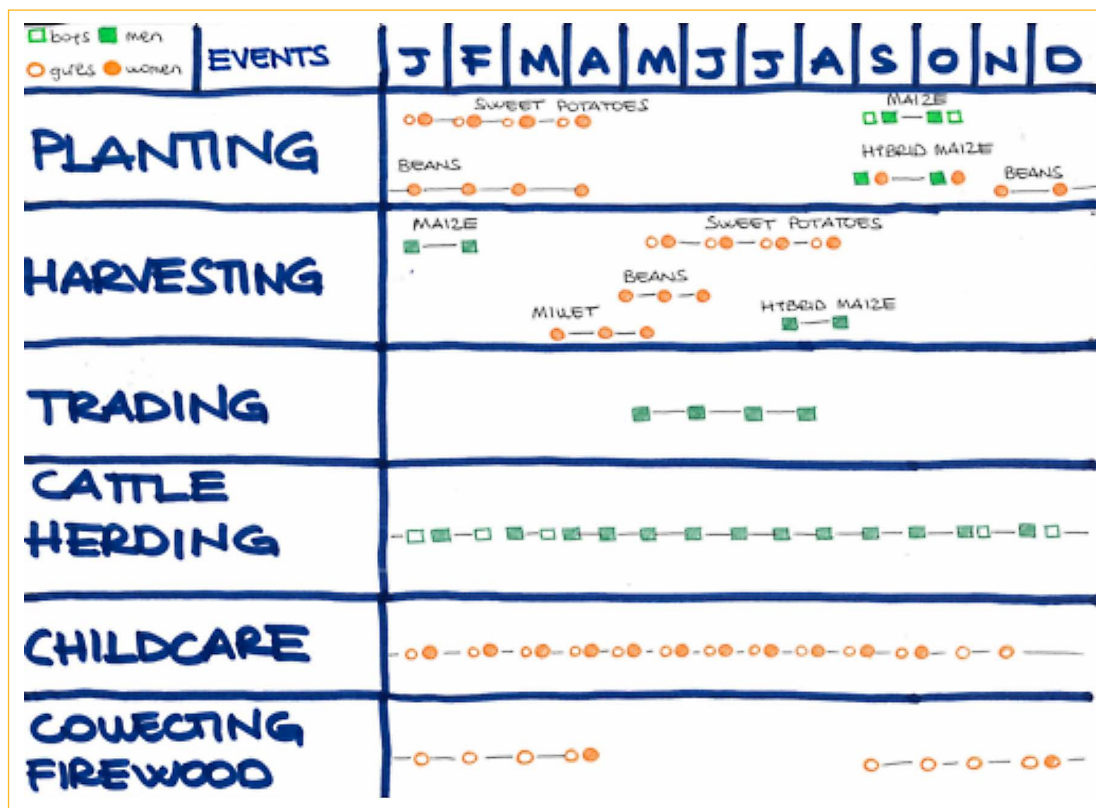


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PROCESS – SEASONAL CALENDARS

1. Prepare a table showing months along the top of the sheet and activities listed down the left side.
2. To highlight climate vulnerability, the calendar can also have a row for showing hazards expected – e.g. floods or landslides, pests and diseases.
3. Monthly variations in agricultural labour requirements over the year can reveal the months of seasonal migration or periods of spare labour capacity.
4. Assigning agreed symbols to different social groups in a given community can add useful information to seasonal calendars to show how women and men may be affected differently by climate trends. (See the example below.)
5. Discuss the information and how trends in rainfall and temperature have affected planting and harvesting dates, and yields, as well as pest infestations, etc. Highlight changes over recent years linked with rising temperatures.
6. Discuss labour availability, and how migration increases or decreases adaptive capacity in the long and short term, and how income diversification can increase adaptive capacity. This also facilitates monitoring and evaluation.

FIGURE 6: EXAMPLE OF A SEASONAL CALENDAR

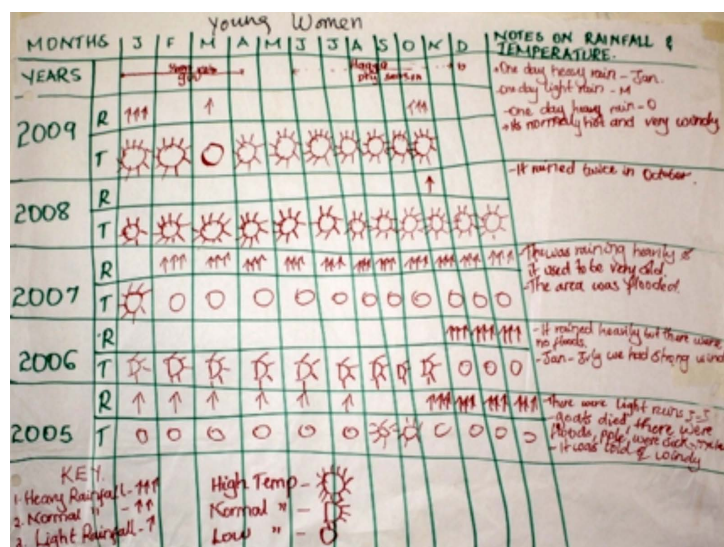
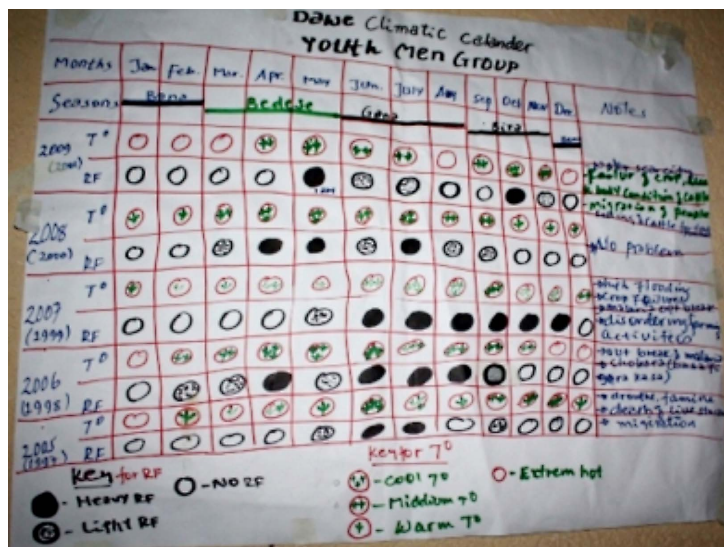


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PROCESS: RAIN CALENDARS⁶

1. Participants are asked to plot rainfall and temperature conditions experienced over five years or more.
2. They plot the timing (i.e. the months or seasons and where possible, the specific weeks) during which rain fell in their locality. They should also plot the amount of rainfall received under the categories of little/below normal, average/normal, or heavy/above normal.
3. Information on temperature level (normal, high, cold, very cold) and timing is also plotted in the same way for each year.
4. Participants describe the nature, duration, distribution, and effects of rainfall and temperature conditions experienced on their livelihoods.
5. Where meteorological weather records and other relevant reports are available at the local level, these are compared to the information provided by communities for validation.

FIGURE 7: EXAMPLES OF RAIN CALENDARS



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⁶ Adapted from Awuor, C. and Hammil, A. 2009. PLA Notes 60. <http://pubs.iied.org/pdfs/14573IIED.pdf>.

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For further information see: www.careclimatechange.org

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