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

PMERL MANUAL

A MANUAL FOR LOCAL PRACTITIONERS

care®

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June 2012

This manual has been produced by CARE International, with technical input by the International Institute for Environment and Development (IIED). CARE acknowledges the critical role played by IIED in all stages of manual development.

The development of this paper has been supported by UKaid from the Department for International Development (DFID). Views expressed do not necessarily reflect the department's official policies.

Cover photo by Mette-Marie Nielsen
Manual layout: Mette Schou, gipsy graphics

This manual is available in electronic form at:
www.careclimatechange.org/files/adaptation/CARE_PMERL_Manual_2012.pdf

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FOREWORD

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As climate extremes and trends become more erratic, countries and communities across the world are beginning to develop plans and strategies to adapt to both the short term climate variability as well as longer term climate change.

Thus adaptation to climate change is getting higher up political agendas both at national as well as global levels. One area of adaptation that has been rapidly developing in recent years, mainly by NGOs but also by some governments, is to focus on the most vulnerable communities (who are also very often the poorest communities) within countries. This arena of adaptation to climate change is now called Community Based Adaptation (CBA) and has grown from a few dozen pilot scale activities to many hundred in almost all countries of the world, including in developed countries.

Despite the increase in attention to and practice of community-based adaptation, there remains a lack of participatory, practical, replicable and relevant methodologies for measuring, monitoring and evaluating changes in vulnerability and adaptive capacity to generate evidence of successful community-based adaptation. In response to this gap, an Experts Working Group[1] was convened by CARE in partnership with IIED in February 2011, to develop a participatory monitoring and evaluation (PM&E) framework for local and community-based adaptation. The resulting framework is a Monitoring, Evaluation, Reflection & Learning (MERL) tool primarily intended to support adaptive decision-making in vulnerable communities. It is intended to be an open-source PM&E methodology that can be used for and by vulnerable communities, supported by planners, practitioners and policymakers across the field, to inform their adaptation planning and implementation.

The framework presents a participatory methodology for developing and monitoring against CBA indicators, and in doing so provides a new platform for local stakeholders to articulate their own needs, which is a fundamental part of building adaptive capacity. The dual learning and downward-accountability functions of the MERL framework for CBA present an opportunity for building and measuring changes in local adaptive capacity as for facilitating the measurement of 'effective adaptation' that can inform the monitoring and reporting needs of stakeholders across scales. The framework also responds to the need for continuous feedback and joint learning and communication in order for CBA to be flexible in light of the challenge of uncertainty. When M&E is carried out in a participatory fashion it enables an ongoing dialogue with and within communities as part of the promoted continuous learning and reflection process.

This manual is therefore both timely and useful for CBA practitioners. Even though countries and communities will differ from each other, there are still significant elements in common which can be shared. The manual should therefore be treated not as a rigid guide to be followed slavishly, but rather to be adapted to local circumstances.

I am sure that it will make a very useful contribution towards the common goal of all CBA practitioners, namely to empower the poorest and most vulnerable communities to adapt to the potential adverse impacts of climate change as they unfold over the coming decades.

[1] The Experts Group included the following organisations: CARE, IDRC, IDS - Sussex, IIED, IISD, INDIGO, ODI, Oxfam, Mercy Corps, Red Cross/ Red Crescent, WRI, Practical Action and ACCRA.

ACKNOWLEDGEMENTS

This manual was written by Jessica Ayers and Simon Anderson from the International Institute for Environment and Development (IIED), Tine Rossing from the CARE International Poverty, Environment and Climate Change Network (PECCN) Secretariat, and Sibongile Pradhan, Consultant (IIED).

The original conceptualisation of this manual and the development of the scope of the assignment owes a debt to Charles Ehrhart (formerly CARE/PECCN) and Angie Dazé (CARE/PECCN).

In February 2011, CARE, supported by IIED, convened an Experts Workshop on participatory monitoring and evaluation (PM&E) for Community-based Adaptation (CBA) in London. Representatives from 13 organisations attended. This manual is based on insights gained from and the contributions made by the representatives from these organisations, in addition to the lessons from CARE's and IIED's own evolving participatory monitoring and evaluation processes for community-based planning and adaptation.

The authors would also like to acknowledge the contributions of the participants from the London workshop: Maarten van Aalst (Red Cross/Red Crescent Climate Centre), Kaia Ambrose (CARE Canada), Nathalie Beaulieu (IDRC CCAA), Rachel Berger (Practical Action), Angie Dazé (CARE/PECCN), Karl Deering (CARE UK), Charles Ehrhart (formerly CARE/PECCN), Anne Hammill (IISD), Lindsey Jones (ODI), Clement Herbert Kalonga (Oxfam), Bettina Kroelle (Indigo Development and Change), Heather McGray (WRI), Victor Orindi (IIED/Ministry of Northern Kenya), Fiona Percy (CARE/ALP), Tamara Plush (CARE/PECCN), Bruce Ravesloot (CARE/PECCN) and Paula Silva Villanueva (IDS).

A sincere thanks go to the CARE and IIED colleagues who read various iterations of the manual and provided valuable comments, suggestions and design support: Angie Dazé (CARE/PECCN), Karl Deering (CARE UK), Charles Ehrhart (formerly CARE/PECCN), Pascal Girot (CARE/PECCN) Fiona Percy (CARE/ALP), Tamara Plush (CARE/PECCN) and Bruce Ravesloot (CARE/PECCN).

A special thanks to Agnes Otzelberger (CARE/PECCN) for carefully reviewing the manual from a gender point of view and to Saleemul Huq and the Action Research for Community Adaptation in Bangladesh (ARCAB), for their valuable inputs.

ACRONYMS AND ABBREVIATIONS

ACCRA	Africa Climate Change Resilience Alliance
ALP	Adaptation Learning Programme (for Africa)
ARCAB	Action Research for Community Adaptation in Bangladesh
BMNT	British Nepal Medical Trust
BRIDGE	Research and information programme located within IDS Knowledge Services
CARE	Cooperative for Assistance and Relief Everywhere
CBA	Community-based Adaptation
CBO	Community-Based Organisation
CCAA	Climate Change Adaptation in Africa
CVCA	Climate Vulnerability and Capacity Analysis
DCCCC	District Climate Change Coordination Committee
DIPECHO	The European Union's Disaster Preparedness under the Humanitarian aid and Civil Protection Directorate General
DRR	Disaster Risk Reduction
EbA	Ecosystem-Based Adaptation
EXSECO	Exposure, Sensitivity and Coping
HRBA	Human Rights-Based Approach–also known as RBA (Rights-Based Approach)
IDRC	International Development Research Centre
IDS	Institute of Development Studies
IIED	International Institute for Environment and Development
IISD	International Institute for Sustainable Development
IPCC	Intergovernmental Panel in Climate Change
IUCN	The International Union for Conservation of Nature
KISS	Keep it simple & straightforward
LAC	Local Adaptive Capacity (framework)
LAPA	Local Adaptation Plan of Action
MERL	Monitoring, Evaluation, Reflection and Learning
MSC	Most Significant Change
NEWAH	Nepal Water for Health
NGO	Non-government organisation
NTFP	Non-timber forest product
ODI	Overseas Development Institute
OECD	Organisation for Economic Co-operation and Development
PECCN	Poverty, Environment and Climate Change Network
PM&E	Participatory Monitoring and Evaluation
PMERL	Participatory Monitoring, Evaluation, Reflection and Learning
PLA	Participatory Learning and Action
PRA	Participatory Rural Appraisal
RIMS	Risk Management Society
SLD	Shared Learning Dialogue
UN	United Nations
VDC	Village Development Committee
WFP	World Food Programme
WRI	World Resources Institute

INTRODUCTION

WHY DO WE NEED TO MONITOR, EVALUATE, REFLECT ON AND LEARN (MERL) CBA?

Community-based Adaptation (CBA) to climate change enables climate vulnerable people to plan for and adapt to the impacts of climate change. The goal of CBA is to build the resilience of vulnerable individuals, households, communities and societies from the ground up. It is a 'community-led' or 'community-driven' approach to adaptation that complements top-down planning and programmes. This does not mean that CBA is carried out in a vacuum. It operates at multiple levels, so long as communities remain at the centre of planning and action.

CBA is grounded in good development practice. Vulnerability to the impacts of climate change has strong overlaps with poverty and marginalisation. It therefore makes little sense to adapt to climate change impacts without also addressing these underlying development issues, since adaptation is driven by a range of different pressures–or drivers of vulnerability–acting together.[2]

CBA also addresses social drivers of vulnerability including gender inequality and other factors related to social exclusion. Inequalities in the distribution of rights, resources and power are at the root of poverty and vulnerability. For example, gender roles and relations play a strong role in determining power relations, mostly to the detriment of women and girls, with implications for the vulnerability of whole families and communities who depend on them.[3] These inequalities increase many poor people's vulnerability to harmful climate change impacts while limiting their options for coping and adaptation.

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In sum, CBA should be based on local priorities, needs, knowledge and capacities, taking into account social diversity.[4] CBA, however, is more than community development–it needs to focus on building resilience to both current and future climate stresses. Climate change increases existing development challenges and brings new ones. Climate change impacts on ecosystems are increasing pressure on the natural resources that many people depend for their wellbeing and livelihoods. Climate change impacts could also threaten development investments. For instance increasing storm surges are resulting in irreparable damage to coastal homesteads. So, climate change means we need to re-think the long-term context of development planning. If climate change will reduce rainfall then adaptation of agricultural production needs to be more drought resilient. If temperature rise means that the incidence of vector borne human diseases increases, then health care services need to be vigilant and prepared to combat new disease patterns.

In order to manage the interactions between current and future climate hazards and development, CBA action needs to be informed by knowledge and information of current and projected climate risks, incorporating as far as possible scientific climate information as well as local, traditional knowledge into local adaptation planning. But knowledge about climate change risks is uncertain–we do not know exactly what we 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 surprising events. To do this requires a system for monitoring changes in contexts and in the effectiveness of responses to changing contexts. Second, social learning mechanisms are needed for feeding the information generated by monitoring back into the planning and implementation cycle.

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WHY SHOULD THE MERL PROCESS BE PARTICIPATORY?[5]

IN THEORY, MERL COULD BE CARRIED OUT FOR COMMUNITIES, BUT WITHOUT THEIR ACTIVE INVOLVEMENT. SO WHY SHOULD THIS PROCESS BE PARTICIPATORY–OR WHY SHOULD WE ADD A 'P' TO MERL?

One of the most significant legacies shaping CBA is the widespread adoption of a Human Rights-Based Approach (HRBA, or RBA) to development and even wider acceptance of its participatory, process-oriented principles.[6] 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. Increasingly applied to development policy and practice during the past twenty years, they have fundamentally shaped how many development actors see the challenge of adaptation–and their role in meeting it. Integrating these principles into adaptation efforts entails explicit steps to:

- Identify differentials in vulnerability and adaptive capacity across demographic groups (by gender, age, ethnicity, etc.) and identify particularly vulnerable individuals and marginalised social groups;
- Seek full inclusion of particularly vulnerable and marginalised groups in all levels of adaptation planning, as well as implementation processes (by providing, for example, information in minority languages);
- Understand and address their unique needs through targeted interventions (reaching poor women, the elderly, geographically isolated communities, and politically marginalised Indigenous Peoples);
- Ensure that adaptation activities do not inadvertently worsen their vulnerability;
- Redress power imbalances and other structural causes of differential vulnerability within and between households.

Toward this end, CBA projects often aim to make government planning and resources allocation systems–at all levels–more responsive to people's needs by increasing equity and diversity, participation and accountability:

- **NON-DISCRIMINATION, EQUITY AND DIVERSITY** acknowledge that socially differentiated vulnerabilities, capacities, priorities and needs require well contextualised responses that address inequalities in the distribution of resources, benefits and responsibilities.
- **ACTIVE, FREE AND MEANINGFUL PARTICIPATION** in development decision-making is a fundamental right. Participation is also a solid operational principle, since leaving intended community members participating in the project out of decision-making increases the risk that interventions will not match people's priorities and needs; be culturally or ecologically inappropriate; or services will prove too costly. In the context of adaptation, this principle is commonly interpreted as meaning people have the right to influence adaptation plans, policies and practices–at all levels.

It has resulted in projects facilitating timely, transparent information flows about climate change; aiding women (through training and mentoring) to take on leadership roles in community and local government organisations. This principle also helps explains the emphasis that CBA proponents typically place on empowerment versus charitable support.

- **EMPOWERMENT** as a principle is interpreted as a mandate to help people gain the power, capacities, capabilities and access (political, economic, etc.) necessary to adapt their households, communities and societies to the impacts of climate change.

- **ACCOUNTABILITY** is another core HRBA principle affecting how development actors view the adaptation challenge. It aims to increase people's capacity to claim their rights, as well as state capacity to be held accountable (through more accessible and responsive public officials/ institutions, etc.). In the context of climate change, this principle is frequently evoked to justify downward accountability for the flow and allocation of adaptation funding.

To ensure that local adaptation planning and implementation is responsive to people's needs, the principles of equity and diversity, participation, and accountability should also be the underpinnings of the monitoring, evaluation, learning and reflection (MERL) process–hence, the 'P' in the PMERL. An overarching goal with the PMERL approach is to provide a platform for local stakeholders to articulate their own needs. In other words, this focus on empowerment is a fundamental part of building adaptive capacity among poor and vulnerable people, where marginalisation is at the core of their vulnerability. Additionally, the 'L' and 'R' in the PMERL approach stand for the need to facilitate continuous and joint learning and reflection. The process of joint learning is especially important due to the high degree of uncertainty, because not only do we do not know what we are adapting to; we also do not know what success even looks like.

ABOUT PMERL FOR CBA

THE OVERARCHING GOALS OF THE PARTICIPATORY MONITORING, EVALUATION, REFLECTION AND LEARNING (PMERL) APPROACH ARE:

- Provide a platform for local stakeholders to empower them to articulate their own needs.
- Measure changes in adaptive capacity.
- Support the 'adaptive' management of community and local-level CBA strategies and plans so that local stakeholders can continue adapting to the impacts of climate change beyond the scope of a given CBA intervention/project.
- Facilitate continuous and joint learning and reflection, which is particularly important for CBA due to the high degree of uncertainty.

The PMERL[7] approach helps communities address the challenges of climate change. Participation, joint learning and reflection processes are integrated into the monitoring and evaluation of Community-based Adaptation to ensure these efforts are as effective as possible. Yet, this manual is not meant to guide the integration of adaptation into M&E in other sectors.

PMERL encourages the ownership of and accountability for the M&E process and outputs by the communities themselves. It also promotes accountability of involved service providers downwards towards the communities. As such, PMERL encourages joint responsibility and co-learning between service providers and communities to improve Community-based Adaptation processes. PMERL goes beyond conventional monitoring and evaluation by not only facilitating learning from change, but also by providing an evidence base to learn to enable change.[8]

The nature of adaptation as a continuous process responding to uncertain changes, not an end in itself, can make M&E of CBA projects more complex than for development projects. A further challenge is presented by the medium- to long-term timeline of climate change. The design and implementation of PMERL should, therefore, be initiated and undertaken in parallel with CBA planning. This allows for learning from anticipated changes to be actively incorporated back into the project cycle in an iterative manner.

PMERL can be applied to a variety of CBA planning frameworks. The approach is flexible enough that it can be used and adapted by field-based project staff from a wide range of institutions and local communities, in varying socio-cultural and ecological settings.

PMERL HELPS PRACTITIONERS AND COMMUNITIES TO ANSWER THE FOLLOWING QUESTIONS:

- **ARE CBA ACHIEVEMENTS MATCHING EXPECTATIONS?**

  Answering this question helps to track activities and monitor progress against the objectives in the Community-based Adaptation plans. Is supporting CBA making the desired difference? Are communities satisfied with the results of their plans? Are plans staying 'on track' and if not, why not? Have there been any changes to the context that mean adjustments in planned activities or assumptions or even a change in objectives is required?

- **ARE THE CBA ACHIEVEMENTS THE RIGHT ONES?**

  This question encourages a continual reassessment of whether activities are the 'right ones.' It helps us to understand how different stakeholders define success. Are the objectives of the CBA plan in line with the priorities of vulnerable communities and groups? Were the assumptions that CBA activities would lead to vulnerability reduction correct? Have priorities changed over time, in response to changing climate and other contexts?

- **IS THE CBA BEING DONE IN THE RIGHT WAY?**

  The focus here is to understand how implementation can be improved to reach critical social groups with appropriate strategies, reduce costs, and improve sustainability. Is CBA reaching and engaging men and women, boys and girls? Is it reaching and engaging the most vulnerable groups? Are representatives of different social groups, in particular the most vulnerable groups meaningfully engaged in the planning process? What are the stakeholder power dynamics and are they taken into account? Do those who fall into the category of 'most vulnerable' change over time? If so how can the CBA respond? Are interventions using resources effectively, could they be used more effectively? This question helps ensure accountability to stakeholders, practitioners, managers and donors by looking at how CBA is being undertaken and how resources are being used.

- **IS THE CBA REACHING THE RIGHT SCALE?**

  Are the interventions supporting people to adapt and enabling people to make tangible and lasting changes in their adaptive capacity? Does the CBA initiative address larger scale constraints on adaptive capacity (such as governance and institutions) that would enable long-term adaptive capacity?

The PMERL system should be designed and then implemented according to the information necessary to answer these questions. Key indicators relating to different types of information will be monitored and evaluated against the baseline levels of these. The information types are:[9]

- ***Type 1 information:*** CBA **PRACTICE** i.e. information on the progress of community adaptation plans, and changes in the adaptive behaviour of vulnerable people as a result of CBA support. We need to know what is being done and whether it is being done in ways that engage and support the most vulnerable communities.

- ***Type 2 information:*** CBA **OUTCOMES** i.e. information on changes in the adaptive capacity and climate vulnerability of different groups at the community level as a result of CBA practice and support. We need to know if activities are resulting in decreasing vulnerability at the community level, and how.

- ***Type 3 information:*** **CONTEXT** i.e. information on the factors and underlying causes (drivers) of climate vulnerability that are not directly related to climate changes. Commonly termed 'environment effects,' this information tracks the environmental, economic, social and institutional/political context within which adaptation happens which interacts with both CBA practice and also CBA results. We need to know that vulnerabilities are being minimised in light of changing climate and other contexts, to understand how climate and other stresses influence outcomes, and to ensure outcomes are sustainable under climate and other stresses.

The design of the PMERL system for CBA should focus on the key indicators of practice, results and context. Otherwise the PMERL framework quickly reaches an unmanageable size and the likelihood that it will be carried out properly is impaired. While designing the PMERL, it is, therefore, important to 'KISS' it–**KEEP IT SIMPLE & STRAIGHTFORWARD!**

THE PMERL FRAMEWORK IS BASED ON THE FOLLOWING PRINCIPLES:

- **PARTICIPATORY:** PMERL is designed as part of a larger strategy to address social and particularly gender inequalities (see Box on next page) and empower marginalised groups. Stakeholders are involved from the design of the PMERL framework through to data collection, analysis and feedback. Participation is meaningful, because it is empowering and non-extractive due to the continuous involvement through all the PMERL steps and contributes to continuous joint learning for action by local stakeholders, including service providers (see Section 2 for a more detailed discussion on participation).

- **PRACTICAL:** The methods are manageable and affordable as the PMERL framework is relatively simple and at the community scale and can cope with limited pre-existing data. It is, therefore, designed to be sustainable over time. It also draws on existing community-level planning systems and adapts familiar tools and practices used by practitioners of community-based development.

- **REPLICABLE:** The methods are accessible, user-friendly and flexible enough to be used by field-level project staff from a wide range of institutions, in varying socio-cultural and ecological settings. This also means the PMERL is flexible enough to accommodate modifications in response to different local circumstances.

- **RELEVANT:** The framework can be applied to existing CBA project cycles and meet the needs of monitoring and evaluating project impacts as well as contributing to learning and reflection at the community level. As such, the information generated by the PMERL framework is applicable to wider-scale adaptation planning. Although all PMERL indicators are context specific, the PMERL framework provides a systematic approach to establishing domains of change that can bring consistency across different CBA projects, to inform lessons around what CBA 'looks like,' and how it is best supported.

By meeting these principles, the PMERL system should support all stakeholders engaged in CBA in learning 'how to do adaptation better.'

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WHY ADDRESSING GENDER INEQUALITIES IS A PRIORITY 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 inequalities, combined with other factors such as age, ethnicity, livelihood group, or economic status, form an important and often insufficiently addressed barrier to equitable adaptation. Particular investment in empowering women, and engaging men in a process whereby women and men work together as equally recognised decision-makers and agents of change from the household to the global level, form part of a strategy toward gender equality, and resilience.
www.gender-climate.org/Content/Docs/Publications/CARE_Issue_Brief_01%2004%2012_Gender%20FINAL.pdf

ABOUT THIS MANUAL

This is a manual not a recipe book. It does not provide a blueprint of how to do monitoring and evaluation for CBA. Instead it provides a menu of options that is intended to guide the participatory development of specific PMERL strategies that respond to the context-specific needs and challenges of different groups in different contexts.

This manual is intended to be 'open-source.' This manual may be reproduced in whole or in part and in any form for educational or non-profit purposes without special permission from CARE, provided acknowledgment of the source is made. This means that everyone can use the guidelines and adapt the methods to suit their specific range of different processes, projects, contexts and stakeholders needs. It is hoped that those using the manual will provide ways of improving it by sharing the lessons learned in applying an adapting the methods. CARE and IIED would also appreciate receiving a copy of any publication that uses this publication as a source (for specific guidance, see pg 2).

WHO IS THIS MANUAL FOR?[10]

THE PMERL MANUAL HAS BEEN DESIGNED FOR USE BY AND TO BENEFIT THE FOLLOWING THREE GROUPS:

- **PROJECT MANAGERS AND FIELD STAFF.** This manual is primarily intended for use by field staff engaged in designing and implementing Community-based Adaptation projects and programmes. This group will find guidance for how to develop a participatory monitoring and evaluation system in partnership with the communities with whom they work.

- **LOCAL PARTNERS** (government and NGOs). The methodologies and tools are also designed to be used and adapted by a wide range of stakeholders and are applicable to a range of different CBA planning and evaluation processes. Local government and non-governmental organisations can use PMERL to help inform and implement a more flexible and responsive approach to adaptation planning. Finally, the PMERL can be used to verify if the investments made are having the intended results and impacts.

- **COMMUNITIES.** The main objective of the PMERL process is to collect the information required by vulnerable groups and their representatives, to understand how well CBA interventions are working, to strengthen adaptive decision-making at the community-level.[11] After initial guidance from partners above, the goal is for communities to use the tools in this manual themselves to support their own continuous process of investigation and learning. The results can be used to help inform decision-making at the community, household or individual scale, and help communities to recognise and lobby for appropriate support for effective Community-based Adaptation. Involved communities–and the sub-groups, households and individuals that make up a given community–can therefore both use and benefit from the MERL process.

The different users and uses for the PMERL system are laid out in Table 1, below.

WHAT DOES THIS MANUAL DO?

THIS MANUAL PROVIDES A SYSTEM TO:

- Develop participatory monitoring, evaluation, learning and reflection strategies to help stakeholders assess Community-based Adaptation so that practices can improve over time.
- Guide the development of locally specific, community-based indicators for local adaptation, for project planners to assess whether CBA projects are effective in the context of longer-term adaptive processes.
- Monitor changing contexts of vulnerability to inform Community-based Adaptation planning.
- Help ensure mutual accountability of and to stakeholders, managers and donors by demonstrating to what extent project objectives have been met, and whether the objectives remain the right ones.

Many NGOs and local field offices will have their own systems of reporting place. Yet, service providers are also planning under uncertainty, and existing reporting frameworks are often not designed with the flexibility and feedback mechanisms in place to learning from and respond to uncertainty. PMERL provides a systematic way for organisations supporting CBA to account for change. For example, for organisations that commonly report against logframes, unanticipated changes are put down as 'risks' to the project cycle. Instead, MERL allows the learning from anticipated changes to be actively incorporated back into the project cycle–moving them from the 'risk' box into the 'indicators' box. This makes for more active and positive reporting whilst also supporting much needed responsive planning at the local level.

WHAT CAN'T THIS MANUAL DO?

- This manual does not prescribe a framework or fixed set of indicators or processes for assessing CBA. Instead it provides guidance on how to select community-specific indicators in a participatory way.[12]

- This manual is not for reporting against activities and financial flows in a CBA program or project. It is assumed that local organisations have existing mechanisms in place for activities and financial reporting.

The PMERL system is most useful as an internal monitoring, evaluation, learning and reflection tool for planning and 'adaptive management.' The emphasis on participatory processes means that much of the information generated will be subjective and designed to support poor, vulnerable and marginalised people in setting and tracking their own priorities. It does not replace an external M&E reporting methodology. However, it can inform and be complemented by periodic external evaluations.[13]

It is important to note that the PM&E options presented in this manual do not constitute an independent/standalone approach to MERL. Users of this manual are reminded that PM&E is just one part, albeit an important part, of an interconnected web of processes and tools to systematically and effectively collect, analyse, summarise and use information at various levels. Before applying this manual, users should first ensure that PM&E is indeed appropriate to the scope and purpose of the program in question and its MERL system. If so, then it is essential that PM&E forms a coherent and functional whole with the larger MERL system.

This manual contains guidelines covering a wide range of tools and methodologies that vary in complexity and rigor. Some of these have been around for years, while others are relatively new. The choice of tools and methodologies and how they are applied should be informed by their relevance to your program and the available capacity to effectively use the tools. This manual will be a 'living' document, as CARE and IIED acknowledge that the suggested PMERL process is a 'learning-by-doing' process. To this end, the next step in the evolution of this manual will be to field test it in a number of project sites. CARE and IIED are committed

TABLE 1. KEY PMERL QUESTIONS, INFORMATION TYPES AND THE PURPOSE OF THE M&E

Key questions	Information types	Purpose of M&E	Users of information
Are CBA achievements matching expectations?	Results	Key indicators of adaptive capacity and climate vulnerability are monitored over time and the significance of changes against the baseline evaluated.	Vulnerable communities and groups monitor information to inform and improve adaptation plans.
	Context	Changes to the key drivers of climate vulnerability are monitored.	Project/programme managers can use this information to report against project/programme outputs and outcomes.
Are the CBA achievements the right ones?	Results	The changes in adaptive capacity and climate vulnerability achieved are compared to those set out in the CBA plan as objectives.	Vulnerable groups and communities can use this information to articulate and make the changes needed in adaptation plans.
	Context	Changes to the key drivers of climate vulnerability are monitored. This includes the monitoring of the evolution of differences in climate vulnerability between different social incl. gender groups.	Project/programme managers can use this information to improve their accountability to the community members participating in the project, and justify changes to plans in reporting.
Is the CBA being done in the right way?	Practice	The ways the CBA interventions are implemented are monitored and their compliance with the CBA plan and the efficiency & effectiveness of achieving outcomes evaluated.	Project/programme managers can use this information to report against activities.
	Context	Changes to the key non-climate change factors (social, institutional/political and economic environment) (risks & assumptions) affecting the implementation of CBA are monitored.	Vulnerable groups and communities can use this information to articulate and make the changes needed in adaptation plans.
Is the CBA reaching the right scale?	Results	The numbers and profiles of people benefiting from the CBA are monitored and size & make-up of the beneficiary group evaluated as compared to the CBA plan.	Project/programme managers can use this information to report against project/programme outputs and outcomes.
	Practice	The implementation of the CBA as regards to reaching community members targeted by the project is monitored and evaluated.	Project/programme managers can use this information to 'scale up' appropriate CBA approaches.

to carry out such field testing in a few select target areas. We are also very open to other organizations field testing the manual and would welcome feedback.

Based on the lessons learned, we will provide guidance on how best to use or adapt this manual within broader MERL systems.

HOW TO USE THIS MANUAL

THE MANUAL IS PRESENTED IN THREE SECTIONS:

- **SECTION 1: KEY CONCEPTS**– Describes the key concepts used in Community-based Adaptation and participatory monitoring and evaluation.
- **SECTION 2: DESIGNING A PARTICIPATORY PMERL STRATEGY FOR CBA**– Describes the PMERL process in detail. It begins by showing where the PMERL process fits in with the overall CBA program cycle and when it should be initiated. It then takes practitioners through how to develop a PMERL system step by step from design, through to data collection, analysis, and use, linking each step back to the various steps of the CBA program cycle, particularly the planning one.
- **SECTION 3: TOOLS AND METHODS FOR PMERL**– Presents a selection of different tools that can be used for each stage of PMERL development. Many of these tools will be familiar to community development practitioners, who have been involved in Participatory Rural Appraisal (PRA) processes. Yet, the tools included in this manual have been adapted to the climate change context and for use in PMERL.

Although Sections 2 and 3 can be used as stand-alone 'field guides,' it is recommended that Section 1 is read before starting PMERL planning. This is because any tools and methods can be used in many different ways and can have very different outcomes. It is not advised to apply such tools as a 'tick-box' exercise. A key lesson concerning the process of applying PRA tools is 'purpose before tools.' Users are advised to be very clear about their purpose, i.e. which questions they wish to answer by applying a given tool and how they wish to use the information generated. Then they modify the tools to fit their specific needs. This is particularly important given the uncertain context of climate change. Any tool is therefore only as utilises the way it is used, and the purpose it is used for. In order to maximise the potential for the PMERL system, it is important to understand the key concepts behind it.

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[2] Levine, S., Ludi, E. and Jones, L. 2011. Rethinking Support for Adaptive Capacity to Climate Change. The Role of Development Interventions. Findings from Mozambique, Uganda and Ethiopia. London: ODI. www.careclimatechange.org/files/reports/ACCRA-Rethinking-Support-Report.pdf.

[3] CARE (2012). More Equal-More Resilient. Why CARE International is making gender equality and women's empowerment a priority for community-based adaptation. www.careclimatechange.org/files/adaptation/CARE_Issue_Brief_Gender_02.04.12.pdf.

[4] Reid, H., Alam, M., Berger, R., Cannon, T., Huq, S., and Milligan, A. 2010. Community-based Adaptation to climate change: An overview. PLA Notes 60. http://pubs.iied.org/pdfs/14573IIED.pdf

[5] This section is based on a presentation by Charles Ehrhart, formerly CARE, for the 5th International Conference on Community-based Adaptation, Dhaka, Bangladesh, 28th March 2011: Community-Based Adaptation: Core Principles. Practices and Relation to Ecosystem-based Adaptation (EbA).

[6] HRBA provides a conceptual framework for development based on human rights standards as stipulated in international treaties and declarations. It aims to promote and protect human rights by integrating the norms, standards and principles of the international human rights system into the plans, policies and processes of development. Guiding principles of the Human Rights-Based Approach, as set out in the UN Statement of Common Understanding, embody decades of lessons learnt and shift away from a 'needs based approach.' They clarify the ultimate objective of development as 'greater realization of rights,' and they promote strategies that strengthen both the capacity of rights-holders to claim their rights and duty-bearers to fulfill their obligations.

[7] 'PMERL' is a common terminology used in monitoring and evaluation, however usually the 'R' stands for 'Results,' 'Reporting,' or 'Research' (see for example PACT www.pactworld.org). Here, this term has been adapted to emphasise the importance of 'Reflection.'

[8] This is in line with the principles and goals of CARE's Adaptation Learning Programme (ALP), which aims to 'generate information and knowledge for learning and evidence on CBA practice and advocacy.' Although it should be noted that ALP has its own M&E system, which is tailored to the ALP programme, the framework presented here aims as far as possible to complement this.

[9] See also ARCAB Monitoring and Evaluation Framework Paper, draft 17th April 2012.

[10] These stakeholder groups overlap with those described in the Climate Vulnerability and Capacity Analysis Handbook (CARE 2009) so that these resources can be used together. www.careclimatechange.org/cvca.

[11] ARCAB (2012). ARCAB Monitoring and Evaluation Framework Paper. Draft for Feedback. April 2012.

[12] A framework for indicators of CBA is being developed under the Action Research for Community Based Adaptation Bangladesh (ARCAB) consortium, of which CARE is a part. For a copy of this framework, contact lucy.faulker@bcas.net. CARE has also developed a Framework of Milestones and Indicators for Community-Based Adaptation (CBA) – see www.careclimatechange.org.

[13] The ARCAB consortium is working on an approach for aligning PMERL with externally driven evaluations. Contact Lucy Faulker at lucy.faulker@bcas.net for further information.

SECTION 1: **KEY CONCEPTS**[14]

Key concepts from Community-based Adaptation and participatory monitoring and evaluation are discussed here. The terms presented here are used in different ways by different people. Therefore the concepts below are intended to inform the reader of how they are understood for the purposes of this manual. They are not universal definitions.

KEY CONCEPTS RELATED TO COMMUNITY-BASED ADAPTATION

ADAPTATION

'Adaptation' can be broadly described as

> *The process of adjustments to actual or expected climate and its effects, in order to moderate harm or exploit potential benefits.*[15]

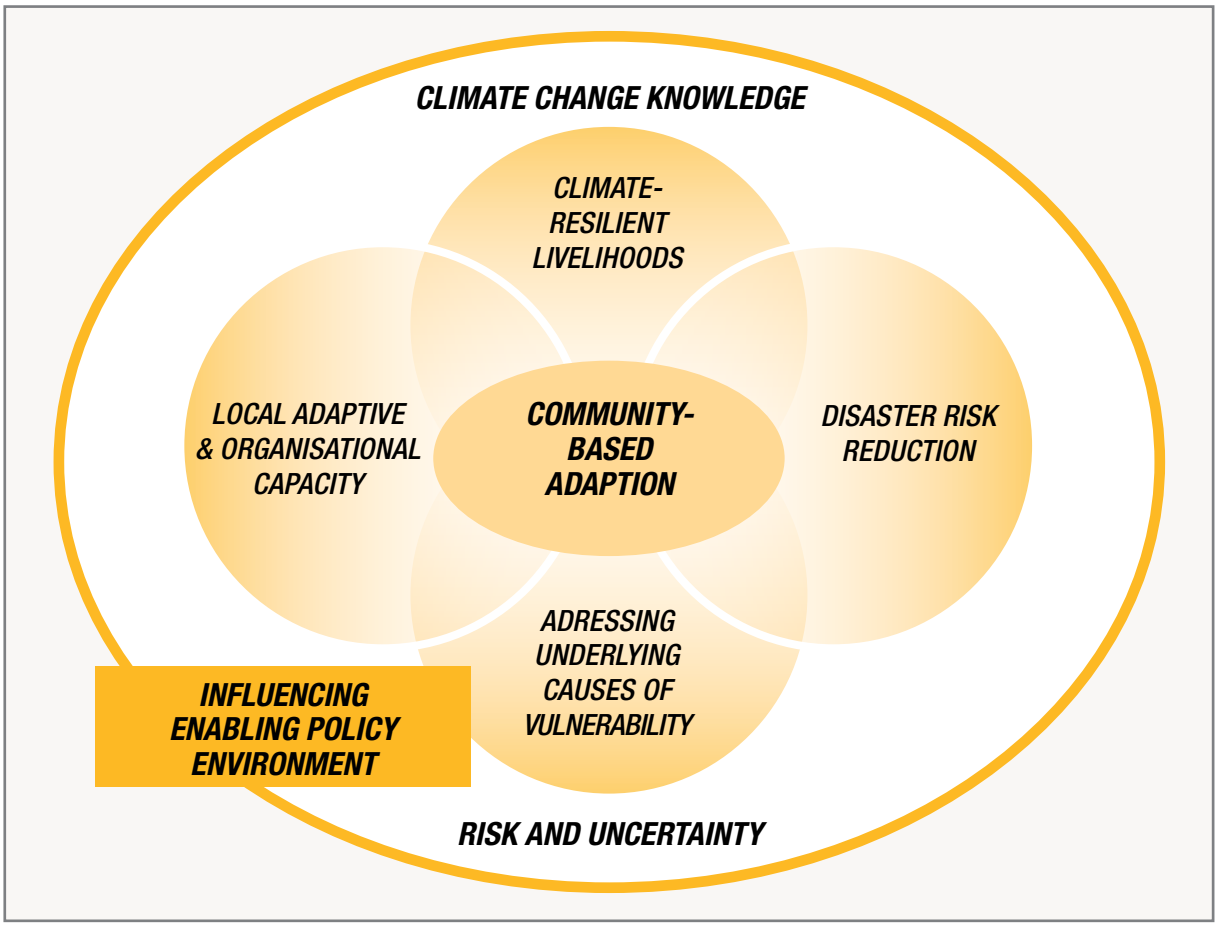
We see adaptation as a process focused on reducing vulnerability, which usually involves building adaptive capacity, particularly of the most vulnerable people. In some cases, it also involves reducing exposure or sensitivity to climate change impacts. In fact, adaptation is more than reducing vulnerability; it is about making sure that development initiatives don't inadvertently increase vulnerability.[16]

Since reducing vulnerability is the foundation of adaptation, it calls for a detailed understanding of who is vulnerable and why. This involves both analysis of current exposure to climate shocks and stresses, and model-based analysis of future climate impacts. With this information, appropriate adaptation strategies can be designed and implemented. Monitoring and evaluating the effectiveness of activities and outputs, as well as sharing knowledge and lessons learnt, are also critical components of the adaptation process.[17] Adaptation can be a process, action or outcome in a system (ecosystem, community, household, group, region or country) that helps the system to better cope with, manage or adjust to the changing conditions, stresses, hazards, risks or opportunities associated with climate change.[18]

COMMUNITY-BASED ADAPTATION TO CLIMATE CHANGE[19]

Community-based Adaptation describes the process of reducing negative impacts of climate change on vulnerable populations–communities, households and individuals–from the bottom up. There are many definitions of CBA. CARE, however, has developed a CBA framework that provides a holistic analytical approach for communities to gain adaptive capacity and plan adaptation actions that are 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. This approach recognises that 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.

FIGURE 1: **THE CBA FRAMEWORK**



THE FOUR ELEMENTS FOR SUCCESSFUL ADAPTATION ARE:

1) Promotion of climate-resilient livelihoods strategies such as diversification of land use and incomes;

2) Disaster risk reduction strategies to reduce impacts of increasing climate-related natural disasters on vulnerable households;

3) Strengthening capacity in a) community adaptive capacity such as in access to climate information and managing risk and uncertainty and b) local civil society and governmental institutions to better support communities in adaptation efforts; and lastly,

4) Local and national level empowerment, advocacy and social mobilisation to: a) address the underlying causes of vulnerability, such as poor governance, gender-based inequality over resource use, or limited access to basic services, and b) influence the policy and enabling environment. Adaptation planning in all of these elements is informed by climate knowledge and risks.

CBA aims to build community adaptive capacity, such that communities and community groups are able to develop well informed adaptation plans and to embed the CBA and community plans within local government development and disaster risk reduction (DRR) planning processes. 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. CBA is complex in that there is no one solution for adaptation interventions. As a result, these will differ across communities, livelihood and ecological systems 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 changing climate.

Communities make decisions and implement their own adaptation plans, which are integrated or linked to local government development plans and which they systematically update in response to new forecasts and other events. In other words:

- Increased adaptive capacity of individuals, communities and local governments affected by climate change
- Adaptation planning processes by communities and local governments which are informed by weather and climate change information, as well as people's and ecosystems' vulnerability and capacity to adapt to climate change impacts.
- Resilient adaptation plans and interventions which are sustainable, climate resilient, flexible and manage risks

VULNERABILITY

Vulnerability to climate change is:

> *'The degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change… Vulnerability is a function of the character, magnitude, and rate of climate change and variation to which a system is exposed, its sensitivity, and its adaptive capacity.'*[20]

In the context of CBA, the systems referred to are communities (recognising that there are significant differences within communities that mean different households and individuals within communities will experience different levels of vulnerability).

EXPOSURE is often closely related to the geographic location of the community. 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.

SENSITIVITY is the degree to which a community is affected by climatic stress. A community dependent on rain-fed agriculture is much more sensitive to changing rainfall patterns than one where the main livelihood strategy is labour in a mining facility, for instance.

VULNERABILITY to climate change and poverty and exclusion strongly overlap, but they are not entirely the same. Within a given community, the poorest and most marginalised groups are often most likely to be the most climate-vulnerable, this is not automatically the case. Shifting the focus on climate vulnerability, therefore, has implications for targeting. Often, adding the dimension of climate change risk exposure to a vulnerability analysis reveals a larger cohort of people, social groups or households who fall into 'highly vulnerable' categories, because those on the periphery of 'high vulnerability' drop down when a climate hazard is exacerbated.[21]

RESILIENCE

A lot of research has gone into defining the properties, principles, and processes that strengthen resilience at the individual, household, community, institution and ecosystem levels. As a result of this research, and ongoing programming experience, many definitions of 'resilience' have been developed.[22] For this manual, we have chosen the following one:

> *'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.'*[23]

It is important to note here that the change that needs to be managed can result from shocks and stresses that are not only caused by climate change–for example a cyclone or a drought–but also other factors, such as violent conflict, changing migration patterns or changes in world and local prices for crops and livestock.

According to Dodman and others (2009), resilience means to move beyond short-term coping strategies toward longer-term development in spite of, or in light of climate change (or other changes). They see resilience as a process of building securities of the affected people in ways that enable them to respond positively not only to climate-related shocks and stresses, but also the additional myriad of challenges that constrain their lives and livelihoods. The more adaptive capacity you have, the more resilient to climate change–and other changes–you are. This is true for individuals, households, enterprises and economies.[24]

This means that resilience is more a process than an outcome, which involves learning, adaptation, anticipation and improvement in basic structures, actors and functions.[25] Mitchell and Harris (2012) identify the following key characteristics of a resilient system:

- A high level of diversity, in terms of access to assets, voices included in decision-making and in the availability of economic opportunities
- Level of connectivity between institutions and organisations at different scales and the extent to which information, knowledge, evaluation and learning propagates up and down across these scales
- The extent to which different forms of knowledge are blended to anticipate and manage processes of change
- The level of redundancy within a system, meaning some aspects can fail without leading to whole system collapse
- The extent to which the system is equal and inclusive of its component parts, not distributing risks in an imbalanced way
- The degree of social cohesion and capital, allowing individuals to be supported within embedded social structures.

ADAPTIVE CAPACITY

Adaptive capacity can be understood as:

> *The nature and extent of access to and use of resources in order to deal not only with disturbance (e.g. shocks or hazards) but also with stresses and longer-term trends (i.e., changing conditions).*[26]

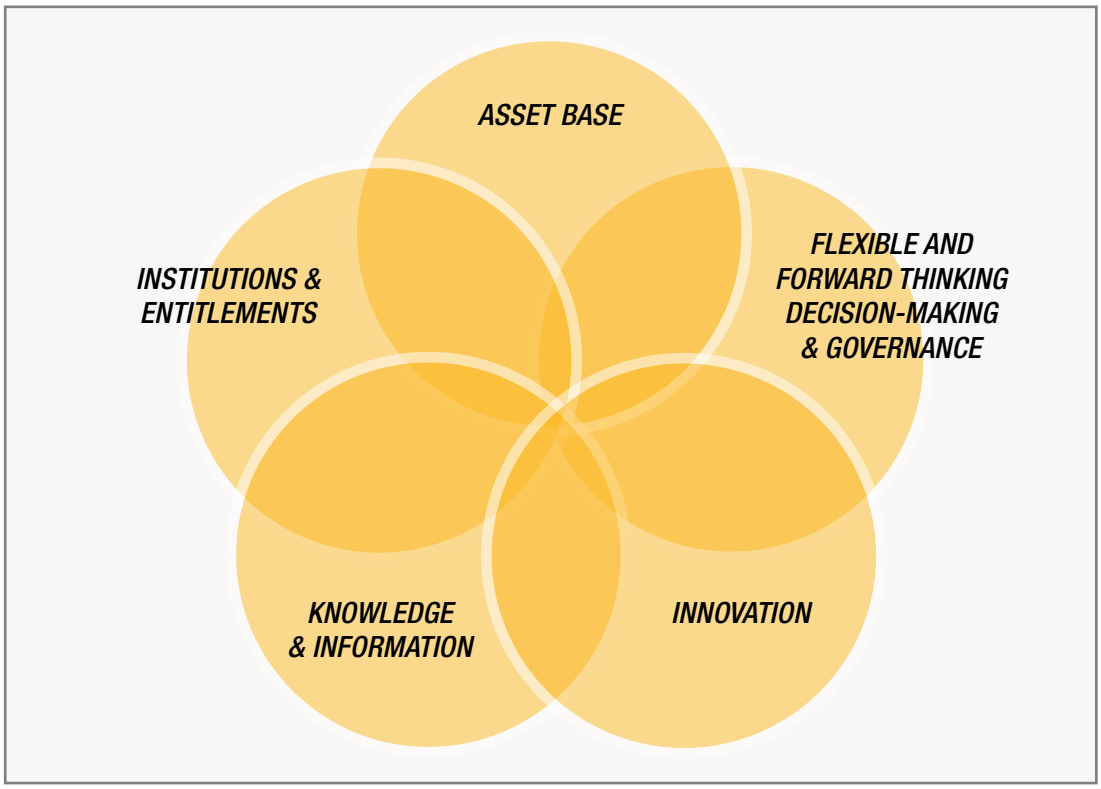
It results not only in the ability to 'bounce back' from shocks but to successfully adapt to longer-term trends or changing conditions in the future.[27] 'It can be thought of is both the processes and resources [assets] that enable somebody or something [a 'unit.' which can be a person, a household, a community or even an institution or a system such as an ecosystem] to adapt rather than the act of adapting, or its outcome.[28]

One of the biggest challenges within development programming is how to ensure that individuals and societies can adapt beyond the project or programme cycle of an intervention. 'This is key to climate change adaptation because there is no end-point to which people have to adapt; people need to acquire the capacity to adapt for generations to come. The challenge to development practice is how to meet immediate needs whilst also building this capacity to adapt in the future. A focus on resilience alone does not necessarily bring in this perspective; a specific focus on adaptive capacity is needed.'[29]

Adaptive capacity refers to the potential to adapt, as and when needed, and not necessarily the act of adapting or its outcome. Adaptive capacity is multi-dimensional and the elements that make up an individual's adaptive capacity are not entirely agreed. It essentially relates to whether people have the right tools and the necessary enabling environment to allow them to adapt successfully over the long term. It is also important to bear in mind that adaptive capacity is context-specific and varies from country to country, community to community, between social groups and individuals, and over time.[30]

According to the Africa Climate Change Resilience Alliance (ACCRA),[31] it is not possible to directly measure adaptive capacity, as 'it refers to the 'potential' of individuals and societies to respond to change; so instead the research sought to investigate dimensions that are considered to contribute to the adaptive capacity of a system in a particular context.' ACCRA identified the following five characteristics that make up the Local Adaptive Capacity framework (see Figure 2) used in the ACCRA research to investigate the impact of development interventions on people's and communities' adaptive capacity. The figure shows the relationship between characteristics of adaptive capacity at the local level.

FIGURE 2: **THE ACCRA FRAMEWORK FOR THINKING ABOUT LOCAL ADAPTIVE CAPACITY**[32]



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

In applying this framework, it is important that no one system in Community-based Adaptation (whether defined in social, geographic, livelihood or other terms) is a homogenous entity, and these attributes will therefore vary within the said system. Efforts to increase adaptive capacity as part of a strategy toward resilience need to particularly invest in the inclusion and promotion of marginalised and highly vulnerable groups.

KEY CONCEPTS RELATED TO PARTICIPATORY MONITORING AND EVALUATION

MONITORING AND EVALUATION

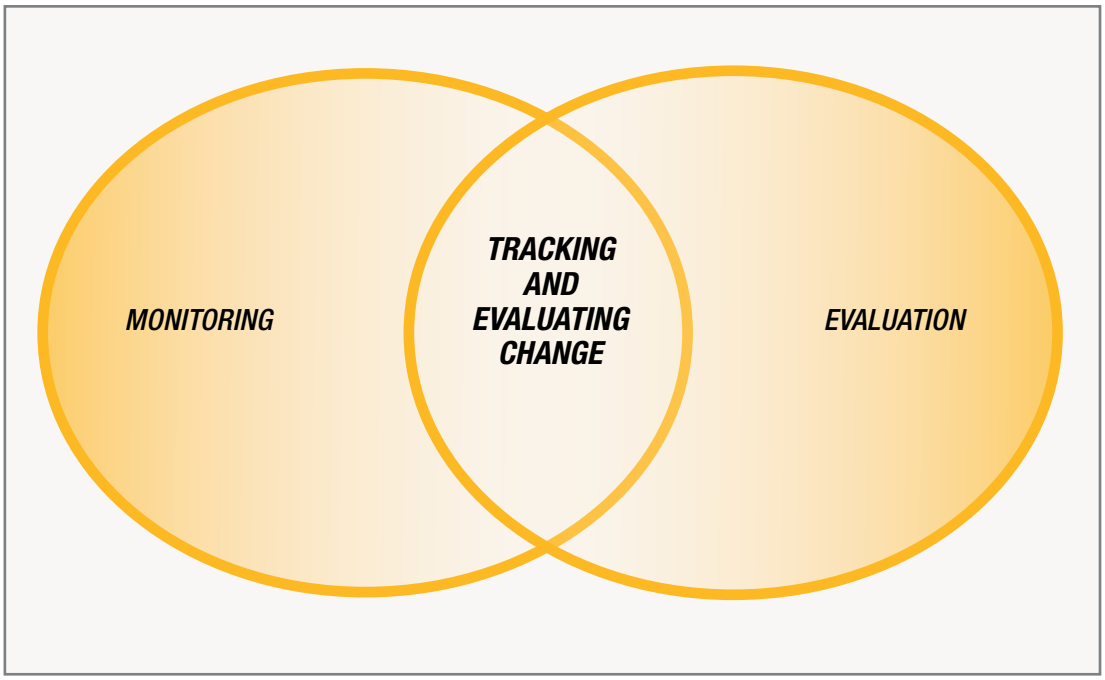
Monitoring and evaluation (M&E) are complementary concepts that overlap as well (see Figure 3):

MONITORING is the set of actions that provide information on where an initiative is at any given time (and over time) relative to activities, inputs, outputs, targets and outcomes. It can also be used to describe the systematic tracking of the contexts within which initiatives are carried out to identify trends. Monitoring tends to be descriptive.

EVALUATION generates evidence on why and how well the outputs, targets and outcomes of an initiative are, or are not, being achieved. Evaluation assesses what has taken place. This is often done in order to improve future outcomes. Through evaluation it is possible to interpret the changes that have been identified through monitoring. Evaluation is analytical and reflective and looks at causality.

Monitoring is done on frequent and routine basis; whereas evaluation is carried out periodically. Monitoring collates observations. Evaluation assesses the meanings behind these observations. When monitoring and evaluation are used effectively both activities contribute to one another and to the performance of the initiative in questions. For example, the information collected through monitoring can be used for regular evaluation of progress, so that adjustments can be made to the way an initiative proceeds and the way subsequent initiatives are designed.

FIGURE 3: **MONITORING AND EVALUATION**



'Participatory' M&E (PM&E) assesses change through processes that involve many people or groups, each of whom is affecting or is affected by the changes being assessed. Negotiation leads to agreement on how progress should be measured and how the findings will be acted upon.[33] PM&E has emerged as a key feature of participatory and community-based development. It draws on the methods and tools of participatory action research (PAR), including Participatory Rural Appraisal (PRA) that many practitioners reading this manual will be familiar with.

However, as with participatory development, there are different ways that 'participatory' has been understood in PM&E. For some, it means involving all relevant groups in designing the entire M&E approach, from the setting of project goals and baselines, through to the assessments and reporting of progress against these. For others, it can mean local people helping to refine methods, or define the main M&E objectives. In other cases it can mean that the community members participating in the project are active in data collection and helping to analyse information. Other cases are termed participative but are simply consultative. Truly participatory action only occurs when the stakeholders involved share common objectives of the action.

In line with the approach taken by CARE, PM&E is understood here as a methodology (for M&E) that is designed as part of a larger strategy to reduce social inequalities and gender inequalities in particular. Its participatory methods are meant to be non-extractive, i.e. create learning processes owned, directed and maintained by local stakeholders (including informed engagement with policy-makers, as opposed to extracting information from and subsequently analysing it in remote distance from said local stakeholders.

This definition is people centered–project stakeholders, including the community members participating in the project, are the key actors of the evaluation process and not just the objects of the evaluation. PM&E therefore 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. Four key principles can be used to guide this approach to PM&E:[34]

BOX 1: WHAT CONSTITUTES 'TRUSTWORTHY' DATA? GUIJIT, 1999

The shift from an external expert-dominated approach to M&E towards PM&E with community involvement leads to questions over 'trustworthy,' 'rigorous' and 'accurate' data. For example, the accuracy of a scratch mark on a wooden stick that farmers prefer to written percentages on a piece of paper might be questioned by scientists. However, farmers' reluctance to use an alien but scientifically acceptable method would probably decrease the reliability of more conventional scientific measurements.

The question of ensuring both local participation and external validity largely depends on the level at which monitoring and evaluation is needed and by whom it is used. PM&E calls for greater acceptance of different information sources and the use of alternative methods for assessing reliability, other than through conventional scientific measurement.

- **PARTICIPATION** means opening up the design of the M&E system to include those most directly affected by climate impacts and agreeing to collect and analyse data together.
- **NEGOTIATION** is an important dimension among initiative managers, implementers and community members to agree on what will be monitored and evaluated, how and when the data are collected and analysed, what the analysed data actually mean, how the findings will be shared and what actions will be taken.
- All those involved in PM&E need to be open to learn from the process and from the contributions of other stakeholders.

BOX 2: EQUALITY VERSUS EQUITY– THE EXAMPLE OF GENDER

GENDER EQUALITY refers to the equal enjoyment by women, girls, boys and men of rights, opportunities, resources and rewards. Equality does not mean that women and men are the same but that their enjoyment of rights, opportunities and life chances are not governed or limited by whether they were born male or female.

GENDER EQUITY is about justice in the distribution of resources, benefits and responsibilities between women and men, boys and girls. Power relations between girls and boys, women and men are unequal and need to be addressed. Women's empowerment and particular investment of resources in women and girls are key elements of gender equity, but not the only ones: Gender equality cannot be achieved without the engagement of men and boys.

FLEXIBILITY is essential as the number, role and skills of stakeholders and other factors change over time. An additional principle is equity and inclusion: It is important to ensure that negotiated outcomes do not merely reflect the views of the most powerful institutions, groups or individuals, achieved by a well-facilitated process of bringing to bear the views and priorities of marginalised and excluded groups which are often difficult to reach and include in decision-making processes. Doing so, therefore, often requires equity i.e. particular resources invested in measures to promote marginalised and excluded groups (see Box 2).

PM&E done well is a process of collective learning. Stakeholders are more likely to learn and be responsive to learning if they are directly engaged in the M&E process. PM&E brings different types of decision-makers and knowledge together to assess and negotiate project strategies, maximising the potential for filling knowledge gaps and reducing conflict (although not always, see below).

This makes PM&E useful as a project management tool. As PM&E is undertaken, all stakeholders are encouraged to reflect systematically on the project and on their experiences throughout project implementation. Engaging decision-makers (including communities) in this process means all stakeholders have the information they need to respond to change and improve project effectiveness, enabling effective feedback of and response to the information generated through PM&E.

There is no prescribed set of approaches or blueprint for PM&E. The process suggested in this manual should evolve in each project context used depending on the information needs, capacities, and interests of different stakeholders. Field staff should be ready to adapt methods in light of local realities, needs and values, that all will change over time.

KEY BENEFITS AND CHALLENGES FOR APPLYING PM&E TO CBA

THE FACT THAT PM&E CAN BE USED TO FACILITATE LEARNING AND RESPONSIVE PLANNING MAKES IT A USEFUL TOOL FOR MEETING THE CHALLENGES OF CBA IN THE FOLLOWING WAYS:

- **CONTEXT SPECIFIC WAYS OF MEASURING CHANGE:** Climate adaptive capacity and vulnerability are context specific. A top-down, generic framework for measuring the changes brought about through CBA will not capture the different priorities of different groups in different places. PM&E allows disaggregated and context-specific indicators for CBA to be set by vulnerable people, ensuring the changes that are relevant to those doing the adaptation are observed and analysed.

- **RESPONDING TO UNCERTAINTY:** CBA has to manage the uncertainty about what future climate change impacts will be, and how systems will respond to these impacts. In some cases people will be unclear as to what they are 'adapting to,' or even what 'successful' adaptation looks like. At the start of project planning key factors can be identified that are considered to be important, but knowing 'how much' will be achieved (target setting) is difficult. Priorities and targets could change over time and new climate events and trends emerge and interact with similarly uncertain social and economic factors. The flexibility of PM&E, and the emphasis on learning, reflection and adjustment, means changes can be tracked, assessed and responded to.

- **SOCIAL LEARNING AS A WAY OF BUILDING ADAPTIVE CAPACITY:** The act of learning builds adaptive capacity. This is because responding to climate change requires knowledge about how contexts are changing, and what options people have to respond.[35] PM&E provides a mechanism for documenting and responding to learning by the people who need the information most–those people adapting, and the project staff supporting them.

- **RAISING CRITICAL AWARENESS OF AND SUPPORTING THE REDUCTION OF SOCIAL INCLUSION AND GENDER INEQUALITIES.** By investing in a critical awareness of power relations and the identification of under-represented or excluded groups, which are often amongst those most affected by harmful climate change impacts, PM&E provides an opportunity for the empowerment and strengthening the voice of groups which would otherwise be left out of the process.

SUCCESSFULLY INTEGRATING GENDER INTO PMERL: KEY POINTS TO TAKE INTO ACCOUNT

SOCIAL DIFFERENCES RELATING TO GENDER are 'learned, and though deeply rooted in every culture, are changeable over a lifetime or generations, and have wide variations both within and between cultures. Gender, along with other factors such as wealth and ethnicity, often determines the rights, roles, opportunities, power, access to and control over resources for women and men in any culture.'*

IN ADDITION TO THE POWER DYNAMICS BETWEEN MEN AND WOMEN, girls and boys, there is a need to further identify and understand the dynamics among women, among men and the positive and negative contributions of both men and women with regard to gender equality and equity.

CLIMATE CHANGE IMPACTS ARE CAUSING NEW CHANGES AND SHIFTS in gender 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 to women, men, girls and boys.

INCLUSIVE AND MEANINGFUL PARTICIPATION of all community groups, particularly the most vulnerable, is needed in all the phases of the CBA project (from assessment to implementation, monitoring and evaluation). This fosters women's and men's self-confidence, responsibility, and leadership, which is vital to positive and sustainable adaptation and development.

M&E OF CBA NEEDS TO:

MONITOR AND DOCUMENT GENDER ACHIEVEMENTS in CBA projects to generate critical knowledge and evidence, which can be used to advocate for and contribute to an enabling environment for gender CBA policy at community, local, national and global levels.

RECOGNISE THAT GENDER IS ABOUT POWER RELATIONS and, thus, monitor and evaluate gender dynamics not only in absolute terms (numbers of female/ male beneficiaries) or in isolation (impacts on men versus impacts on women), but in relative terms (increases or decreases in gender gaps, changes in gender relations); and

ASSESS THE KNOWLEDGE, ATTITUDES AND PRACTICES related to gender within CBA for successful implementation of community based adaptation.

** CARE International (2009). Gender Policy.*

Source: extracted from the Communiqué on Gender and Community-based Adaptation in Africa, produced by the participants of the Gender and Community-based Adaptation Learning Workshop organised by the Adaptation Learning Programme for Africa, in Bolgatanga, Ghana, August 22-25 2011. www.careclimatechange.org/files/adaptation/ALP2011_Gender_and_CBA.pdf

HOWEVER, PM&E IS NOT A 'MAGIC BULLET' SO THERE ARE MANY CHALLENGES THAT PRACTITIONERS NEED TO BE AWARE OF:

- **TIME AND RESOURCES:** A PM&E process is more time and resource intensive than most external evaluation processes. This is because the process requires involving a large number of stakeholders, negotiating each step of the process, and collecting and analysing different types of information, by different people, using different methods, and investment in feedback and learning. Significant investment of time is also needed for the identification and meaningful inclusion of marginalised or excluded groups. This burden does not only fall on the project. Community members participating in the project, particularly if engaged voluntarily and unremunerated in the process, must have the time and interest to do so. Incentives for engagement must be balanced against the costs in terms of time and resources. This makes it particularly important to ensure that the information being collected meets the needs of all those engaged in the process.

- **SOCIAL AND POLITICAL ISSUES** need to be managed during the PM&E process. Each stakeholder will have their own needs, priorities and expectations that may not be the same as others. Some have more or less power to speak, capacity to analyse, and different views on what is 'valid' and 'rigorous' information (see Box 2). The key to successful PM&E is finding ways to access the views of the most vulnerable groups and negotiating differences with the most powerful groups, as the needs and priorities of these different groups may conflict with each another. The greater the balance of information needs, the more successful the PM&E will be, however this will also increase the costs and time of the PM&E process.

- **BALANCING 'UPWARD' AND 'DOWNWARD' ACCOUNTABILITY.** Conventional M&E systems encourage accountability 'upwards' to donors. PM&E incorporates the information and learning needs of community members participating in the project encouraging 'accountability downwards.' In climate change planning and adaptation implementation, these two may conflict. Donors may require reporting against fixed project cycles with rigid indicators and objectives within time-bound projects. Local partners may want information on whether those goals are still relevant, and the freedom to respond to changing contexts by adapting project cycles.

  However, good PM&E can lead to a well-documented justification for more flexible and responsive planning. PM&E can be used to negotiate donor expectations around the evaluation of adaptation. It is therefore important that any flexibility in PM&E and CBA planning is accurately recorded and reported to donors, and used as a basis for external project evaluations.

- **CONTEXT SPECIFIC INDICATORS VERSUS COMPARABILITY:** PM&E gives rise to context specific indicators of effective adaptation. This addresses the learning needs of each individual community and sub-groups within communities. However, this makes it difficult to compare CBA across different communities–how do we know if one community is 'adapting better' than another? Which methodologies are 'best practice' and should be scaled up? One way of addressing this to some extent is to use similar indicator 'parameters' that are the same across all projects, but within each parameter the indicators are different. This gives some degree of qualitative comparability. Section 2 of this manual proposes options for achieving this.

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[14] Concepts of adaptation, CBA, vulnerability and adaptive capacity are adapted from Climate Vulnerability and Capacity Analysis Handbook (CARE, 2009). Available at www.careclimatechange.org/cvca
[15] IPCC, 2007. Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the intergovernmental Panel on Climate Change. M.L. Parry, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds. Cambridge University Press.
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[19] CARE's definition of CBA approaches and framework were initially conceived and elaborated in the CVCA Handbook (2009). CARE is currently in the progress of updating its CBA approaches, which is outlined in ALP (2012) Participatory Community-based Adaptation (CBA) Process. Draft for review and development.
[20] IPCC, 2007. IPCC (2007) Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Summary for policy makers.
[21] ARCAB (2012). ARCAB Monitoring and Evaluation Framework Paper. Draft for Feedback. April 2012.
[22] Frankenberger, T. and others (2012). Building Resilience to Food Security Shocks in the Horn of Africa. Discussion Note.
[23] UK Department for International Development (DFID), 2011. Defining Disaster Resilience: A DFID Approach Paper.
[24] ARCAB (2012). ARCAB Monitoring and Evaluation Framework Paper. Draft for Feedback. April 2012.
[25] Mitchell, T. and K. Harris (2012) Resilience: A risk management approach. Background Note, Overseas Development Institute (ODI).

The Table 2 below summarises some of the trade-offs involved in the design of a PM&E system for CBA.

TABLE 2: TRADE-OFFS INVOLVED IN THE DESIGN CHOICES FOR A PM&E SYSTEM FOR CBA

Comprehensiveness vs. Institutional sustainability	
A PM&E system that covers all aspects of CBA–costs & benefits of adaptation, short/ medium term outcomes, differentiated effects etc–will render a great deal of evidence and learning. Knowing what aspects to leave out implies very difficult choices.	In order for the local organisations to adopt and properly employ a PM&E system over the medium term it has to be comprehendible by the people involved and the value of the outputs proportionate to the efforts invested in carrying out the PM&E.
'Scientific' rigor vs. Local ownership	
The level of detail required of monitoring data and sampling design of the how/ where the observations (e.g. including control populations, with & without/ before & after interventions) for the results of the evaluation to be unequivocal scientifically are huge and complex. The effectiveness of CBA for reducing climate vulnerability needs to be robustly tested. Knowing what works where is important.	The management of statistically and scientifically valid M&E system is complex and often will be beyond the capability of local people and their organisations. However, local ownership of the PM&E process and results is vital for the performance of the CBA and for the longer term objective of improving adaptive capacity. Local ownership requires that the PM&E system is understood by and largely managed locally.
Time constraints vs. Empowerment (especially with regard to marginalised groups)	
Carrying out PM&E activities is skillful, requires time, and needs to be methodical and consistent over time. Trained enumerators and facilitators can greatly speed up the process and ensure the accuracy and validity of the observations made and data collected.	If PM&E is aimed at the empowerment of those people that are vulnerable to climate effects to make good decisions on what and how adaptation will be carried out, to learn systematically and experientially what works, and to not only participate in but also drive the processes, a significant amount of time and resources needs to be invested. Social change does not happen over night and requires careful attention to conflict.
Specificity vs. Replicability	
The most effective adaptation is high resolution. It happens when local needs are identified and addressed according to the actual conditions. We know that many factors mean that generic or one size fits all adaptation measures are unlikely to benefit the most vulnerable and marginalised people and groups. The PM&E system needs to reflect this and be tailored to local conditions and needs.	The time taken to develop a PM&E system for CBA initiatives should not be under-estimated. It will be a significant proportion of the total investment made in the CBA. So the possibility to use off the shelf systems is attractive as the less spent on PM&E the more is available for actual adaptation. So the design of a PM&E system that can be used across several initiatives should be considered.
Relevance to local actors vs. Non-local duty-bearers	
One of the main attributes of a PM&E system for CBA is that it is an instrument for local people to use for their own ends. In order for local people to adopt such a system what it measures and observes must be what interests local people. The instrument must meet local expectations and address local issues.	The capital and technical assistance costs of CBA interventions are often borne by organisations outside of the communities where the adaptation is taking place. The PM&E system should enable local people to account for the outside resources invested and therefore non-local stakeholders will define some of the system focuses upon.

[26] TANGO International (2012). The Resilience Framework, draft for comments
[27] TANGO International (2012). The Resilience Framework, draft for comments
[28] Ludi, E., and others. 2011. From Preparing for the future? Understanding the influence of development interventions on adaptive capacity at local level in Ethiopia. Africa Climate Change Resilience Alliance (ACCRA) Ethiopia Synthesis Report
[29] Levine, S., Ludi, E. and Jones, L. 2011. Rethinking Support for Adaptive Capacity to Climate Change. The Role of Development Interventions. Findings from Mozambique, Uganda and Ethiopia. London: ODI. www.careclimatechange.org/files/reports/ACCRA-Rethinking-Support-Report.pdf.
[30] Smit B and J Wandel, 2006. Adaptation, adaptive capacity and vulnerability. Global Environmental Change, 16: 282-292.
[31] Smit B and J Wandel, 2006. Adaptation, adaptive capacity and vulnerability. Global Environmental Change, 16: 282-292.
[32] Levine, S., Ludi, E. and Jones, L. 2011. Rethinking Support for Adaptive Capacity to Climate Change. The Role of Development Interventions. Findings from Mozambique, Uganda and Ethiopia. London: ODI. www.careclimatechange.org/files/reports/ACCRA-Rethinking-Support-Report.pdf.
[33] Guijit, I. 1999. Participatory monitoring and evaluation for natural resource management. Socio-Economic Methodologies for Natural Resources Research Best Practice Guidelines. NRI/IIED. www.nri.org/publications/bpg/bpg04.pdf.
[34] Estrella M., and Gaventa, J. 1998. Who counts reality? Participatory monitoring and evaluation: A literature review. IDS Working Paper 70. www.ids.ac.uk/go/idspublication/who-counts-reality-participatory-monitoring-and-evaluation-a-literature-review.
[35] See the ACCRA framework for further details on the role of innovation and learning in adaptive capacity http://community.eldis.org/.59d669a8/Research.html

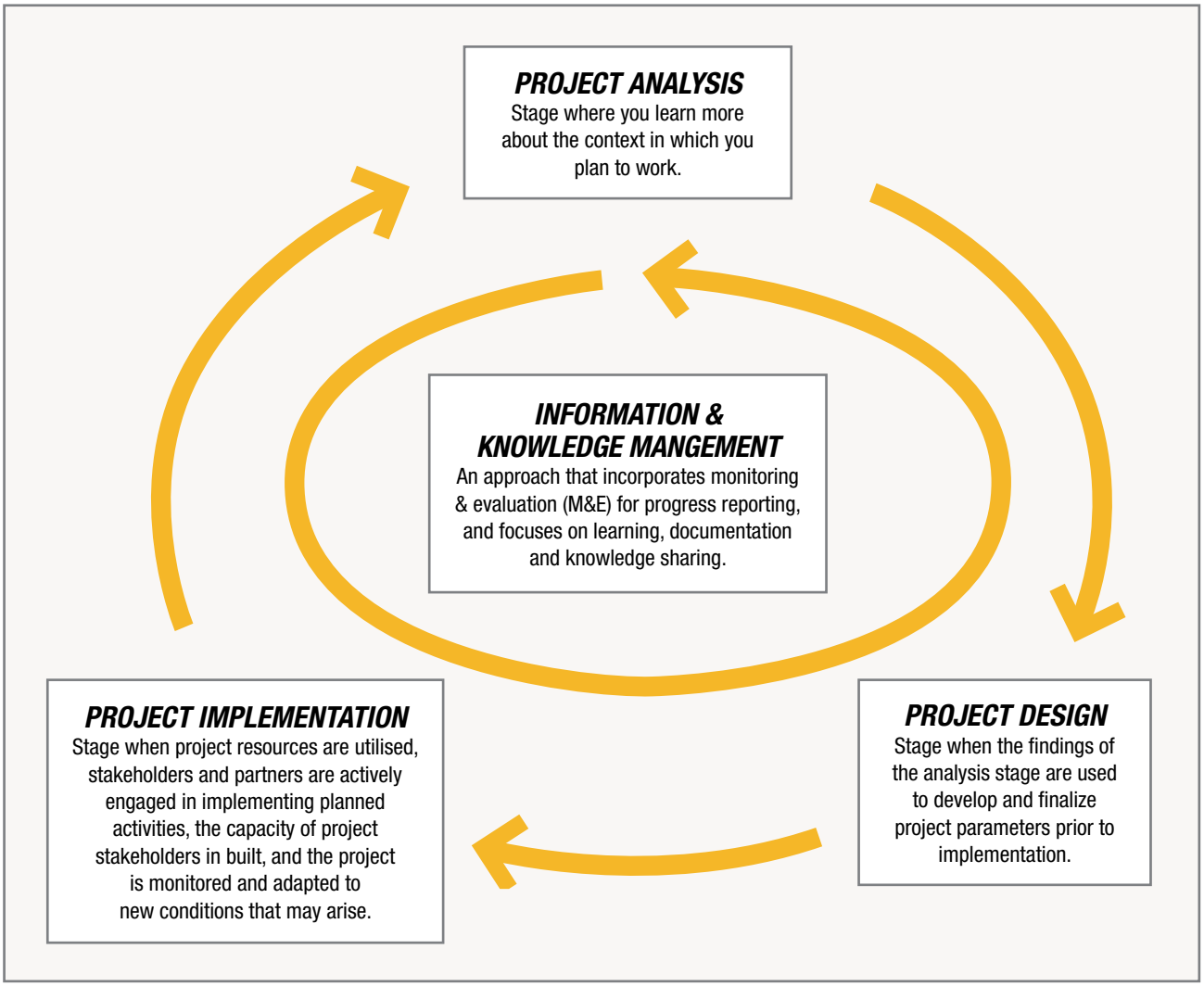
SECTION 2: DESIGNING A PMERL STRATEGY FOR CBA PROJECTS

PMERL AND THE CBA PROJECT CYCLE

CBA planning takes place during the 'project analysis' and 'project design' phases of the overall CBA project cycle. Although evaluation is often presented as coming at the 'end' of the project cycle, most of the information collected to establish a PMERL is needed at the beginning of the intervention–setting indicators at the beginning of planning helps us to focus plans towards achieving those indicators. We need to set 'baselines' before interventions begin, so we can compare 'before' and 'after.' Setting indicators and baselines at the planning stage means we can monitor progress from the outset. Different types of evaluations tend to happen during and after the project but are informed by the learning developed during monitoring.

For example, the 'project analysis' phase of CBA planning, during which stakeholders learn about the context in which the CBA is to work, is important for informing baseline data. 'Project design' is where project outcomes are set, and indicators and targets can be developed. 'Project implementation' needs to be monitored and needs to respond to the emerging information. PMERL then informs how the project progresses, creating the final link in a project cycle 'learning loop.' Figure 4 below presents a CBA Project cycle, with PMERL represented as part of, and inherent to, 'information and knowledge management':

FIGURE 4: THE CBA PROJECT CYCLE[36]



This section presents guidance for how to amend, use and organise the information generated through CBA planning for the purposes of M&E, and what new information needs to be collected. PMERL should not be seen as a stand-alone 'end phase' or a separate set of activities. Rather, it is important that the PMERL strategy is initiated at the beginning of planning–i.e. during the 'Project Analysis' phase–and undertaken throughout CBA planning and implementation.

THERE ARE FIVE KEY PHASES IN DEVELOPING A PMERL STRATEGY:

1. Establish the PMERL team

2. Design a PMERL plan or system, including deciding on outcomes, indicators, baselines, and how you will monitor and evaluate these.

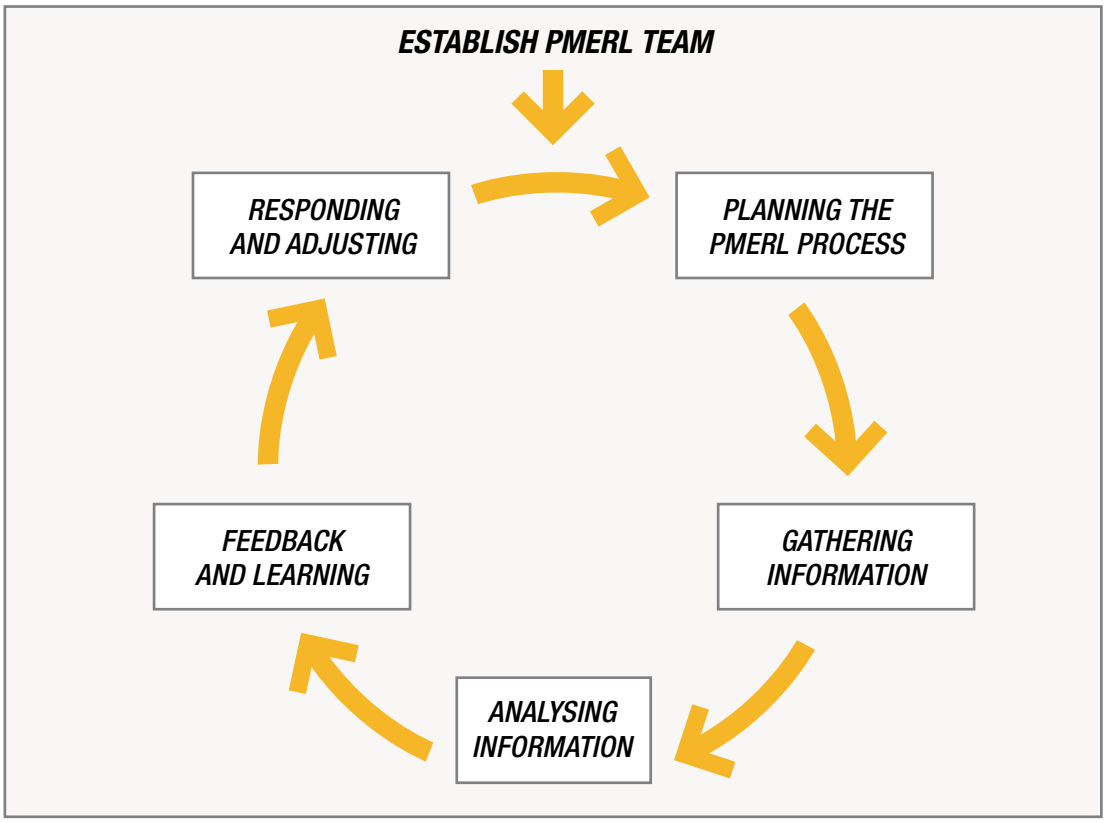
3. Implement the PMERL system

4. Data analysis

5. Learning, reflection, feedback, response and adjustment

This last phase does not just mean 'feedback, learning and response' for the project. It also means feeding back into the PMERL system itself, so that PMERL is also responsive. For example, if the information from PMERL suggests that a project is missing a key outcome that is important to stakeholders in enabling adaptation, or perhaps new outcomes become important as the context of the project changes. This new priority would be added to the project plan. But it would also need to be added as a new outcome indicator to the PMERL framework–giving rise to new indicators for this outcome, new baselines, and a revised plan for monitoring change. The PMERL system can therefore be thought of as a cycle or 'learning loop' (see Figure 5).

FIGURE 5: PMERL SYSTEM LEARNING LOOP



THE NEXT SECTION WILL PROVIDE STEP-BY-STEP GUIDANCE ON EACH OF THESE PHASES IN TURN.

2.1 ESTABLISHING A PMERL TEAM

Step 1: Select a facilitator
Step 2: Select PMERL team members in partnership with the community

STEP 1: SELECT A FACILITATOR

The PMERL process needs to be managed and led by a small team of people with representatives from different stakeholder groups. The team will need to be facilitated by one person who takes ultimate responsibility for initiating and overseeing the PMERL process. The facilitator is likely to be a member of project staff and should ideally be someone who is familiar to the community and aware of the socio-economic, political and ecological contexts within which the project is taking place. The facilitator should have good experience of facilitating participatory processes, particularly those that require inputs from marginalised groups (see Box 3). The key skills required by the facilitator may mean that capacity building or facilitation training needs to be undertaken before the process is initiated.

BOX 3: THE ROLE OF THE FACILITATOR

In PM&E the facilitator plays a key role, assisting the meaningful participation of stakeholders in each stage of the evaluation process. The facilitator builds the capacity of the PM&E team to ensure that local people own and manage the system. This requires facilitators to enter into a heavy listening and learning mode and that they enter into local realities. A 'good' facilitator serves mainly as a catalyst or stimulator, rather than a leader, drawing out and bringing together inputs from different types of stakeholders. This requires key skills of negotiation and in some cases conflict resolution. Facilitators should ask 'the right questions at the right time,' listen well, build trust, encourage the sharing of ideas, and at the same time keep the group focused.

BOX 4: THE RESPONSIBILITIES OF THE PMERL TEAM

The responsibilities of the PMERL team will vary between communities, but may include:

- **Planning PMERL in partnership with the community, ensuring that the views of their groups are represented**
- **Gathering information for PMERL**
- **Documenting and storing information**
- **Analyzing information**

STEP 2: SELECT TEAM MEMBERS IN PARTNERSHIP WITH THE COMMUNITY

Selecting PMERL team members requires consultation with the entire community group and sub-groups. It is important that team members represent women and men, as well as the voices of the most climate vulnerable groups who are the target group for CBA. At the same time, members of this group may have the least time, capacity and resources to participate. Further, the responsibilities of the PM&E team (see Box 4) mean that the members must be those with the authority and capacity to undertake these activities amongst their peers. Members must be ready to play a leadership role. This role may need to be supported for members of the community who do not commonly occupy powerful positions but whose inputs are identified as important.

SELECTING THE PMERL TEAM CAN BE DONE BY:

- During CBA planning, organise a community consultation meeting. Depending on the dynamics and size of the community group, several sub-meetings may be held with small groups based on gender and livelihood categories. It is appropriate to 'tag' this meeting on to existing CBA planning consultation meetings.

- With the group, the facilitator explains the PMERL–why we need monitoring and evaluation, what the benefits could be, and the principles of a participatory approach.

- Explain the responsibilities of PMERL team members (see Box 4) and ensure everyone is aware of the potential time and resource commitments.
- Ask the group to nominate members of the team. Ask nominees to confirm their desire to be part of the team.
- Discuss with PMERL team their time availability to commit to supporting the process. It is important that members are honest about what they are able to commit to over the long term before PMERL planning starts, to ensure plans are not overly ambitious and therefore unsustainable.
- Work with the team on the development of the PMERL strategy (see below)
- Undertake any necessary training or capacity building on the PMERL methods and tools, approaches to data collection and recording that are identified during the strategy development.

It is recommended that the PMERL team has 6-8 members who will support the facilitator in carrying out the PMERL. Each member must be committed to representing the views of the community across all gender groups (women, men, boys, girls) and particularly marginalised groups. The group should represent a diversity of stakeholder interests. It is recommended that the group is balanced in terms of gender, social status, and livelihood group. It may be beneficial to have at least one representative of a local decision-making body such as local government. Box 5 illustrates a case study of a PM&E group established for the monitoring and evaluation of local adaptation planning in Nepal.

BOX 5: MONITORING TEAMS FOR LOCAL ADAPTATION PLANNING (LAPA)

The British Nepal Medical Trust (BMNT) is one of seven NGOs undertaking Local Adaptation Planning (LAPA) in Nepal. LAPA is an approach to CBA that is 'mainstreamed' into local planning. All LAPA pilot teams adopted a PM&E approach to monitoring and evaluation. One innovative approach was the establishment of local 'monitoring teams,' developed by BMNT. During the planning phase of LAPA, BMNT held small-scale community meetings to explain to the community the need to monitor changes during the LAPA process, related to both the progress of LAPA implementation and also to understand other factors (including climate trends) that could affect LAPA implementation. It was decided to form two 'monitoring groups': One at the ward level to monitor changes in the situations of 'the most vulnerable' and locally experienced trends. Membership included 'P1,' or 'the most vulnerable' and CBO representatives. A second village level group monitored planned activities and fed information from the ward-level group to village level decision-makers. Membership included village-level decision-makers and NGO representatives. The village level group was 'accountable' to the ward level group, and the interaction between the two groups focused on whether the implemented activities had any influence on the vulnerability of beneficiaries; if not, why not; and what could be done better.

KEY QUESTIONS:

- **Who has a perspective or knowledge that is essential?**
- **Whose capacity for monitoring should be strengthened to ensure the sustainability of the process?**
- **Whose absence will mean important information is missed? What would hinder their presence and how can it be strengthened?**
- **Will participants change over time? How will this be managed?**

USEFUL TOOLS:

Tool 1: Shared learning dialogue

DESIGN THE MONITORING PLAN

Step 1: Map stakeholder information needs
Step 2: Deciding what to monitor
Step 3: Developing indicators
Step 4: Measuring baselines
Step 5: Finalising the M&E plan, budget and resource allocation

STEP 1: MAP STAKEHOLDER INFORMATION NEEDS

PMERL planning begins with a stakeholder analysis to understand who the stakeholders are and what their specific interests and information needs are. Stakeholders can be divided into two groups: those who will be affected by the CBA project (those who will be affected by and benefit from the CBA project (directly and indirectly); and those who can influence the project.

Mapping those engaged with the project is part of CBA planning. Who are the target groups? How can they be disaggregated? This information is collected during the analysis and design phases of CBA planning (see for example Design Step 2.3 in CARE's CBA Toolkit).[37]

Mapping wider project partners is more challenging. A useful tool is Tool 2, 'Service Provider Analysis' which helps communities to understand the key actors that influence CBA (see Tool 2, Section 3).

Once stakeholders have been mapped, their information needs are assessed. Again, this is a key step in CBA planning–what is new for the purposes of M&E is the systematic recording of this information.

This step is usually undertaken after the 'sensitisation' phase of developing a CBA plan. For this reason, information needs are considered in light of the knowledge that climate change presents one changing risk. Stakeholders should be encouraged to think about this when identifying their information needs, and to consider which kinds of climate information would be useful to assist them in their adaptation decision-making.

BOX 6: PM&E GLOSSARY

Different organizations have different ways of describing key terms in monitoring and evaluation. The definitions below are intended to explain how these terms are understood in this manual and are not universal definitions.

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.

EFFECTIVENESS: The extent to which the development intervention's objectives were achieved, or are expected to be achieved.

EFFICIENCY: A measure of how economically resources/ inputs (funds, expertise, time, etc.) are converted to results.

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

IMPACTS: The long-term effects produced by the project, directly or indirectly, intended or unintended.

INDICATOR: Measurable or tangible signs that something has changed. They are what we monitor and determine the type of information we need to collect to tell us if change has happened.

INPUTS: The financial, human, and material resources used for the development intervention.

OBJECTIVE: The purpose or desired outcome of a project.

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

OUTPUTS: The products that result from the project activities.

PURPOSE: The stated objectives of the project.

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

For the community, this can be done through community meetings and focus group discussions with specific community sub-groups. Separate meetings can be held with external stakeholders who may play a role in influencing the project. It is important that facilitators are aware of and clearly express their information needs. This is likely to include information about project implementation progress as well as project impact.

The information can be recorded in the following table, which has been populated with an example from the PM&E of LAPA in Nepal from the BMNT pilot study (see Box 5). It is important to note that in the case study below, the information needs were mapped following the CBA planning phase of climate-change sensitisation. Therefore some of the information needs were connected to tracking climate changes.

TABLE 3: EXTRACT FROM MAP OF STAKEHOLDER INFORMATION NEEDS FOR PM&E SYSTEM IN LAPA PILOT BNMT

Stakeholder	Information Needs	Role in CBA project
Mother and child groups	■ What changes will the project make to the village health post? ■ How will the project deal with increased flooding, which affects access to the health post?	Target group
BMNT field staff	■ Are project activities being undertaken on time? ■ Are they reaching the most vulnerable groups?	Project implementers
Village level Health Facility Management Committee member	■ How is the project supporting the health post? ■ How will the project help us to provide health services during flooding?	Influential service provider

Mapping information needs is a good way of getting stakeholders to recognise the value of having different groups represented, and of being involved. However, this can raise a very large number of information needs, and focusing questions is challenging. One way to deal with this is to work with stakeholders to envision how they would use the information if they had it and what decisions they would make. Facilitation can be guided by the three types of information that PMERL will need to be generated in order for stakeholders to do adaptation better:

- *Type 1 information:* **CBA PRACTICE** i.e. information on the progress of community adaptation plans, and changes in the adaptive behaviour of vulnerable people as a result of CBA support. What practices and activities do people want to track? How will we recognise the implementation of interventions, changes in activities changes in behaviour? Whose practice should be tracked?

- *Type 2 information:* **CBA OUTCOMES** i.e. information on changes in the adaptive capacity and climate vulnerability of different groups at the community level as a result of CBA practice and support. What information will tell us that new activities or changes in behaviour have resulted in a change in outputs or outcomes? Which outputs or outcomes do we care about?

- *Type 3 information:* **CONTEXT** i.e. information on the factors (drivers) of climate vulnerability that are not directly related to climate changes. Commonly termed 'environment effects,' this information tracks the context within which adaptation happens which interacts with both CBA practice and also CBA results. Which contextual factors might influence activities and results? Are any of these related to climate change? What about others (such as market changes, political/institutional changes, social and environmental changes)? Which ones are most important and what kinds of information could we use to track them?

Information needs can be organised around these three categories (please refer back to Table 1 in the "About PMERL for CBA" section above). This is illustrated well by the example of LAPA stakeholder information needs illustrated in Table 1. For example, the information needs of the field staff, 'Are project activities being undertaken on time?' is Type 1 information on process and practice; the 'Mother and Child' groups wanted information about 'What changes the project will make to the village health post?' This information is Type 2 information about CBA outcomes. The second question 'How will the project deal with increased flooding, which affects access to the health post?' is Type 3 information about changing climate trends and how the project might have to adjust.

Once a large number of information needs have been collected, they need to be prioritised. This can be done though participatory ranking with each stakeholder group. It is important that the most information needs of each group are met to ensure the relevance of the strategy for effecting change.

KEY QUESTIONS:

- **Who are the different stakeholders?**
- **What kinds of information would they need?**
- **How can different information needs be coordinated?**
- **What information is already being collected? How can we build on this?**
- **Does the final list of information needs include those of the least powerful groups?**
- **Which information needs relate to CBA outcomes?**
- **Which information needs relate to tracking CBA contexts?**

USEFUL TOOLS:
Tool 2: Service provider analysis

STEP 2: DECIDING WHAT TO MONITOR

TYPE 1 INFORMATION: PROCESS AND PRACTICE

Type 1 information requires monitoring two types of processes and practice: First, the activities of the CBA plan. This will to some extent be done by service providers anyway, who have reporting commitments to external authorities. However, it is important that communities are engaged in monitoring activities, because this provides a space for communities to hold both service providers and themselves to account. Are service providers and community members doing what they said they would do? Are these activities meeting the requirements of vulnerable groups effectively? Could plans be adjusted to improve the effectiveness of service provision?

This can be done working with the community monitoring team to develop a Progress Monitoring Table (see example below). During CBA planning, each step of the CBA plan, and all activities, need to be entered into the progress monitoring table (see Table 4). Progress Monitoring should include discussion of what is working and what is not, including any unanticipated shortfalls or opportunities that can be addressed by revising CBA plans. The progress monitoring table makes allowances for what is 'planned,' and what actually happens, acknowledging that circumstances, needs and capacities of both service providers and vulnerable groups will change over time.

Progress monitoring also looks at how many people are benefitting from the CBA plan and who they are. The progress monitoing table includes a column for recording who should benefit from the plan versus who actually may benefit, broken down according to gender and marginalised groups.

Second, adaptation is a process of behaviour change. What are communities doing differently in response to climate stresses? How are CBA plans enabling these changes in behaviour? How have communities interactions between different groups, their practices, patterns of decision-making and strategic choices changed over the course of the CBA plan implementation? How could CBA plans be improved to better enable these changes in behaviour? Because many behaviour changes will be unanticipated, it is difficult to 'decide what to monitor' at the start of the M&E planning process. Instead, it is enough that a process of observing change is put in place at the beginning. Useful tools to establish are Behavioural Change Journals (see Tool 5).

KEY QUESTIONS:

- What are the key activities in CBA plans? When should they be undertaken, and by who? (This is drawn directly from the CBA planning)
- How many people are reached by the CBA plan, and who are they? How will they benefit?
- What behavioural changes have been observed? Who has changed their behaviour and how?

USEFUL TOOLS:

Table 4: Progress monitoring plan
Tool 2: Service provider analysis
Tool 5 (Step 1): Mapping behaviour changes

TABLE 4: A PROGRESS MONITORING PLAN

Activity	**Undertaken by whom?**		**When?**		**Who benefits?** (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?**		**Responses**	
	Planned	Actual	Planned	Actual	Planned	Actual	Positive	Negative	Response to shortfalls	Response to opportunities
					Number of people Composition How did they benefit?	Number of people Composition How did they benefit?				

TYPE 2 INFORMATION: FROM INFORMATION NEEDS TO OUTCOME STATEMENTS

The 'Type 2' information is about results–outputs and outcomes of CBA. These were broadly identified in the 'information needs' step, and now these information needs have to be translated into 'outcome statements'[38] that we can monitor. 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 types of stakeholders. They include 'how' and 'why' and 'for whom' CBA activities should result in particular outcomes. Developing outcome statements helps us to understand whether CBA projects are meeting the needs of stakeholders in ways that matter to them.

BOX 7: DEVELOPING OUTCOME STATEMENTS: EXAMPLE FROM LAPA

This case study is taken from the NEWAH piloting team of the LAPA programme in Nepal, which developed local adaptation plans based on the water, sanitation and hygiene sector, working through community Water Users and Sanitation Committees.

VISIONING HIGH ADAPTIVE CAPACITY: Having explored climate change impacts, local vulnerability and existing response mechanisms, the community envisioned 20 years ahead. They imagined what high adaptive capacity in their household and their community would look like. Individuals called out their ideas (outcome statements), which the facilitator drew on cards. These were clustered and compiled to form the start of a collective vision. These become the criteria (or indicators) against which the community and other stakeholders can later evaluate the effectiveness of the LAPA process.

EXAMPLES OF OUTCOME STATEMENTS INCLUDED:

- 'People have the information and resources to prepare for disasters'
- 'Households have better access to safe drinking water close to their home and the supply system is safe from landslides.'
- 'People can move outside the village during monsoon by improved suspension bridge.'
- 'People have access to credit all year round through community savings options.'

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

- Every household has safe drinking water close to their home and the supply system is safe from landslides.
- Every household carries out new activities that generate income.
- There is a health post and within 1 hour (which has medicine and qualified staff).
- There is a suspension bridge.
- There is a vehicle road within 30 minutes walk.
- There is regular/reliable employment within the district for at least one member of each household (so that no one who does not want to needs to migrate for work).
- Every household is aware of information about climate adaptation, government/NGO facilities and income generating options.
- There is electricity in the village for light in each house and for a small mill.
- The forest around the village is well managed and provides the products needed.
- Open land in the forest is available for use for planting NTFPs for income.
- There is access so that all children can complete their SLC (either a school near by or transport to get there).
- All adults can do basic writing and numeracy.
- People grow many new crops and crop varieties that can thrive in different climatic conditions.
- Cheap loans are available from inside the community (through the WUSC or other CBOs).
- All houses and land are as safe as possible from landslides and floods.
- The community is prepared for disasters and has planned different options to cope and adapt.

Developing outcome statements should be done with the same stakeholder groups as step one. This exercise is best done in a group setting, for example through focus groups or small community meetings, through the following activities:

- With the stakeholders, discuss what 'high adaptive capacity' would look like using Tool 3, 'Adaptation Visioning.' 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 'outcome statements' that identify the road towards reaching 'high adaptive capacity.' Positive statements like 'improved access to health post during flooding' are better than negative statements like 'we want fewer people to become ill during flooding' as it gives the community something to aim for rather than against.

- Refine the outcome statements to be clear on how change towards this outcome could happen. This involves identifying the main actors and institutions involved in that change. Tool 2 on service provider analysis and Tool 5 (Step 1) on mapping behavioral changes can assist.

BOX 8: MOVING FROM LOGICAL FRAMEWORKS TO OUTCOME STATEMENTS

An excerpt from a logical framework of a local adaptation plan from the LAPA pilot Study, Nepal

Goal	Indicators of achievement	Risks
Climate resilient communities	Avoided losses of life and property	Unforeseen climate effects lead to increased vulnerability
Objectives		
Implement measures to reduce flash flooding and protect water sources	Incidence of flash flooding affecting communities	Flood control measures insufficient to mitigate risk
Activities		Comments
Promote the use of minimum tillage agriculture on steep slopes	10 demonstration plots established	Local NGO and Agricultural extension officer to lead
Plant trees onto degraded and eroded land	15 has of slope planted in years 1 & 2	Paid labour provided by the poorest households
Construct 10 check-dams	3 dams constructed in year 1 and 7 in year 2	Contracts awarded through competitive tender process
Protect 5 water sources	2 water sources protected in year 1 and 3 in year 2	Water-user group identifies priority sources. Local families tasked with up-keep

Selection of outcome statements related to the above logical framework:

- **The water user groups maintain protected water sources to avoid water contamination during flash floods.**
- **The NGO promotes minimum tillage practices with farmer field schools upstream so flash flooding is reduced downstream**
- **The District Development Committee allocates funds to installing check-dams, avoiding the deposition of silt downstream which can lead to flooding.**

Working with the community to develop desired project results is a key planning stage for any CBA project. Typically, projects are required to organise results into a logical framework, which clearly shows the links between expected results and the project goal and objectives (see for example CARE CBA Toolkit Design Step 2.4).[39]

However, not all the information needs identified by stakeholders can be incorporated into the rigid format of the logical framework. Outcome statements therefore encourage us to move beyond the logical framework and examine the interesting links between cause and effect. Outcome statements can later be adapted for project reporting purposes into logical frameworks. See Box 8. Developing outcome statements in a participatory way can lead to an overwhelming number of possible outcomes and pathways of change towards each outcome. Not all outcomes can be monitored, so outcomes need to be prioritised.

In order to manage outcomes, it is recommended that 'domains of change' are used to guide outcome development. These are categories of change that the particular CBA project is focusing on. This is not the same as prescribing outcomes. Instead, it is providing stakeholders with 'boxes' to organise the outcomes proposed by stakeholders. Domains of change can be pre-determined by a particular project framework for CBA (see Box 10). In this case they are discussed with the community during participatory project planning, and participants should be encouraged to think about outcome statements that would fit into these categories.

Alternatively, they can emerge from the collection, clustering and sorting of outcome statements during the outcome development process (see Box 11). Outcomes are clustered into similar 'types' and stakeholders decide between them how each outcome cluster can be best described. Between 3 and 6 outcome areas are useful.

BOX 9: A FRAMEWORK FOR MILESTONES AND INDICATORS. CARE INTERNATIONAL.

www.careclimatechange.org/files/toolkit/CARE_CBA_Framework.pdf

CARE has identified four key elements of its CBA Framework that represent 'enabling factors' that must be in place at the household/individual, community/local and national levels in order for effective CBA to take place. These enabling factors are linked to the four key elements of CBA:

- **Promotion of climate-resilient livelihood strategies**
- **Disaster risk reduction strategies to reduce the impact of hazards**
- **Development of local adaptive and organizational capacity for local civil society and governmental institutions (strong emphasis on institutions, rights and governance)**
- **Advocacy, social mobilization and empowerment to address the underlying causes of vulnerability (concerns power, access and control over assets)**

The CBA Framework provides a guide to project teams to identify adaptation strategies at different levels. This does not suggest that any one project would be able to achieve all of these enabling factors. Yet, CBA projects typically entail a combination of at least several intervention types. It is the combination and their interaction of these different factors that constitutes CBA. As such, the framework represents the range of different factors that CBA projects could aim to influence in order to build adaptive capacity of target populations.

BOX 10: THE ADAPTATION LEARNING PROGRAMME IN AFRICA (ALP) DOMAINS OF CHANGE CARE ALP: MONITORING AND EVALUATION SYSTEM. MAY, 2011. PROGRAMME COORDINATION TEAM.

In addition to the five key areas identified in CARE's CBA framework, ALP has an additional objective: Ensuring learning as a key to successful CBA. The Theory of Change under ALP is that:

- CBA is successful if the four elements of the CBA framework (see Box 9) are addressed together and in ways that are informed by knowledge of climate change projections, risks and uncertainties.
- Successful CBA is up-scaled through learning from successes.

The M&E system adopted under ALP therefore also assess whether or not CBA has been successfully piloted, shared and adopted by a wide range of actors and policies. So there are five outcome areas (or 'Domains of Change') identified for ALP, adapted from, and based on the framework presented in Box 9:

- Climate-resilient livelihood strategies
- Disaster risk reduction strategies
- Adaptive capacity and organizational capacity development
- Underlying causes of vulnerability and policy environment
- Learning

BOX 11: DEVELOPING OUTCOMES AREAS THROUGH OUTCOME SORTING: A CASE STUDY FROM THE LAPA PROCESS

Part of the LAPA exercise was to investigate and generate indicators for effective local adaptation planning.

Seven pilot teams working across 12 districts were encouraged to use a range of PM&E approaches to work with communities on generating indicators for effective adaptation planning. This included indicators for local adaptive capacity, and indicators for mainstreaming adaptation priorities into local planning systems.

In February 2010, pilot teams came together to share findings. A wide range of indicators and outcome statements had been developed with different communities. Working in small teams, pilots began to 'cluster' different outcomes. Each outcome was described, and laid on the floor. As each new outcome was described, a discussion was had about whether it was distinctive, or whether it was similar to any of the outcomes already on the floor and why. This gave a 'long list' of outcome areas. Once all the outcomes were laid down, stakeholders discussed which of the clusters were similar, and aggregated them. This eventually resulted in five 'outcome areas' under which all the outcomes and indicators were clustered. These were:

- Existence of systems and institutions to support adaptation
- Quality of systems to support adaptation
- Accessibility of systems to support adaptation (to the most vulnerable groups)
- Wellbeing indicators
- Adaptive behavior outcomes

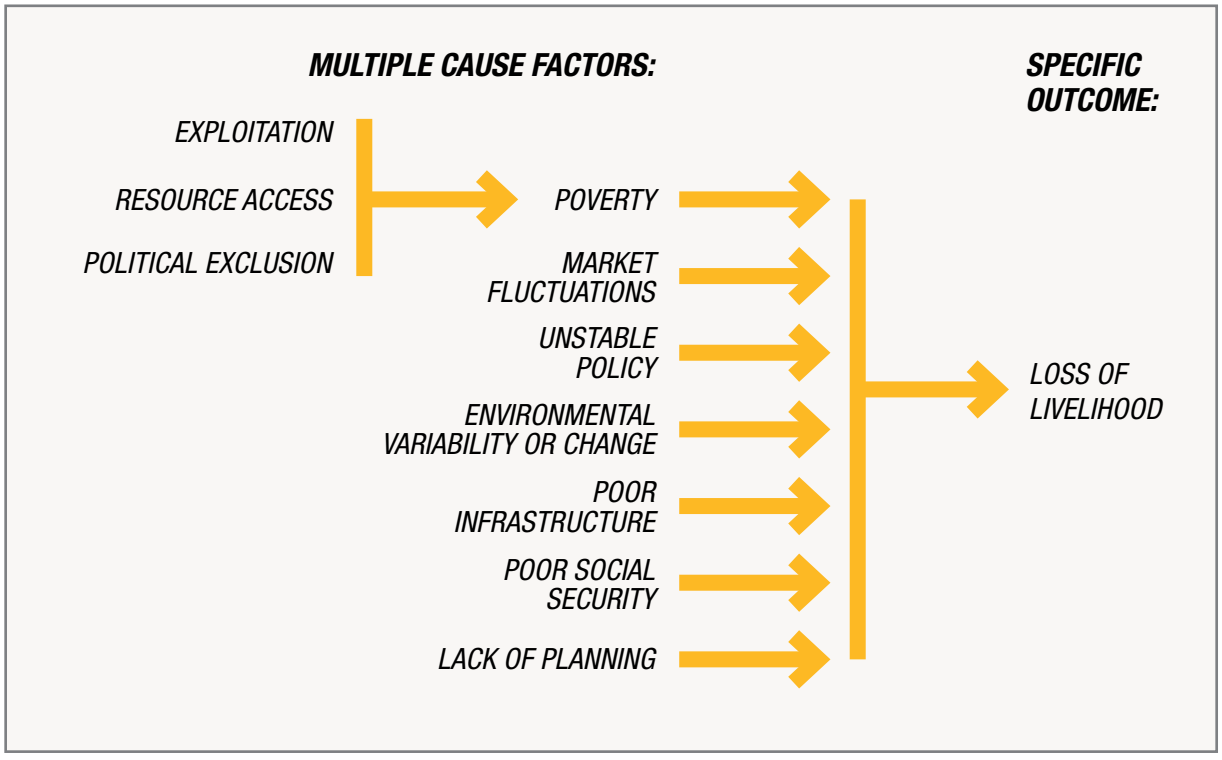
TYPE 3 INFORMATION: DEFINING AND TRACKING THE CONTEXT

The above domains of change all refer to Type 1 information (on process) and Type 2 information (on results). But measuring these indicators without also considering the context within which indicators change means we may end up misinterpreting the results and process changes. Measuring change in an adaptation project forces us to think about how climate change might affect the context within which adaptation takes place. As noted by Brooks et al,

> *'Adaptation will by definition take place against a shifting climatic and environmental baseline… climate change is likely to result in an evolving baseline of climate-related hazards and risks.'*[40]

But climate is not the only aspect of the context likely to change. As described in Section 1, CBA addresses multiple drivers of vulnerability and not just climate change. Often, factors related to poverty, institutions, and social and political exclusion are far more important in determining livelihood vulnerability than the climate context (see Figure 6):

FIGURE 6: **THE MULTIPLE DRIVERS OF LIVELIHOOD VULNERABILITY**



Source: Ribot, 2010[41]

So in order to effectively assess results, we need to consider which factors–climate and other–might change over time in ways that influence results.

Photo: ©CARE/Peter Caton

DEFINING THE CLIMATE CONTEXT

It is important to define the climate and ecosystem context, because we are working with people to help them adapt to climate variability and climate change. What is included in this category will vary from place to place, depending on which kinds of climate-related hazards and stresses people are exposed to, and other factors/drivers of vulnerability (to do with sensitivity) that mean these hazards matter to people. We also need to know which kinds of ecosystems people depend on, and what changes they are already observing and why. Actively recording changes in climate and ecosystems will help people to recognise trends and respond to them. For example, a useful tool is CARE/IISD's 'Rain calendars,' which helps people to understand how changing rainfall patterns can affect their lives and livelihoods (see Tool 12).

Deciding on which climate and ecosystem factors should be done with communities, who are best placed to know which climate hazards are impacting on their lives and livelihoods, and what ecosystem changes would affect them. Identifying these trends is a key step in adaptation planning (see for example, Field Guide 5 in CARE's 'Vulnerability Matrix' in the CVCA Handbook).[42] Other tools include the EXECO tool (Tool 9) and the 'Hazard and response force-field analysis' (Tool 10) are useful tools for prioritising which climate change impacts and trends should be included in the PMERLsystem. This information needs to be captured at the planning stage, because it tells us which climate hazards and ecosystems are priorised by vulnerable groups.

DECIDING ON OTHER CONTEXTUAL FACTORS TO MONITOR

As shown in Figure 6, there are multiple factors that will influence vulnerability and the effectiveness of adaptation. Which ones should be included in the tracking system? The first thing to note is that everything cannot be included; else the tracking system becomes unmanageable. So facilitators should work with communities to create a 'Long list' (which is part of the overall vulnerability assessment), and then a short list–2 or 3–that are of particular importance at the start of CBA. For example, if a lack of lack of a market is undermining the ability of farmers to sell produce and generate income, then local market might be one. If local political unrest means people don't have access to local serves, the local political situation might be another. Over time, priorities will change, so these are not 'set in stone.' They will be revisited at each monitoring meeting and can be changed in light of new priorities and information.

Deciding what will be included on the final short list will without a doubt be a significant challenge. One key objective with the field testing of this manual is to gain practical experience and lessons learned on how to best carry out this selection process. These lessons will be included in the next version of this manual–i.e. version 2.0–as this manual is a 'living document' to be continuously improved based on 'learning by doing.'

DEVELOPING THE PMERL SYSTEM

Once outcomes and context factors have been decided, they should be added together as the first column to the PMERL system (see Table 5 below). The table below presents some examples from the CARE Framework of Milestones and Indicators for CBA for the first outcome area.

TABLE 5: M&E FRAMEWORK SHOWING EXAMPLE OUTCOMES

Outcome	Outcome indicators	Baseline
Outcome area 2: Households are employing climate resilient agricultural practices		
Households are producing crops that are resilient to climate hazards		
Households are practicing conservation agriculture		
Households are employing a mix of agri-cultural and off-farm livelihood strategies		
Type 3 information: Tracking climate changes		
Rainfall Flooding		
Type 3 information: Other contextual (non-climate) factors		
Local political situation The price of fuel		

KEY QUESTIONS:

- What does 'high adaptive capacity' look like and for whom? It should be kept in mind that 'high adaptive capacity' will look different for different stakeholders.
- Do we have outcome statements against each 'outcome area?'
- Do outcome statements reflect the needs of the most vulnerable and marginalized women/ men/ boys/ girls?
- Which climate hazards are identified by project beneficiaries as impacting on their lives and livelihoods?
- What other climate related hazards and trends that matter for the community?
- What ecosystems do people depend on? What are the relationships between ecosystems and climate-related hazards and trends?
- What other factors are likely to influence the effectiveness of CBA?

USEFUL TOOLS:

Tool 2: Service provider analysis
Tool 3: Adaptation visioning
Tool 4: Envisaging future climate scenarios
Tool 5: (Step 1): Mapping behavioural changes
Tool 9: EXECO, an interview tool
Tool 10: Hazard and response force-field analysis
Tool 12: Rain calendars

STEP 3: DEVELOPING INDICATORS

Once outcomes are decided, we need to measure change against them. This is done through indicators. Outcome indicators are measurable or tangible signs that something has changed. They are what we monitor, helping us to answer the questions: Are we moving towards our desired outcomes? Indicators are the type of information we need to collect to tell us if change has happened.

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 'number of people,' can be further gender-aggregated and could read 'number of women/men/boys/girls with access to water during drought.' Quantitative indicators will give information about the 'quality,' 'extent' or 'level' of change, for example to measure quality of systems, or changes in attitudes or awareness to climate change. Quantitative indicators are easier to measure, but qualitative indicators help to explain change.

Indicators need to be developed for every outcome. First, develop a 'long list' of indicators. Continue with small group discussions, but this time ask stakeholders:

- How would we know that change has happened in this outcome?
- How will we know success when we see it?
- What would be the evidence of this change?

BOX 12: GENDER AND M&E: THE DIFFERENCE BETWEEN 'DISAGGREGATING PEOPLE' AND COUNTING FEMALE-HEADED HOUSEHOLDS

There are different ways of counting people in a gender-disaggregated manner. They can be simply disaggregated by sex ('male/ female'), but it often makes sense to refine disaggregation further, by introducing age groups or civil status (single/ married/ divorced/ widowed). It is important to be aware that counting the 'number of women/ men/ boys/ girls with access to/ benefiting from/ participating in etc.' is not the same as disaggregating households by male-headed and female-headed households.

Quantitative surveys often use the household as their unit of analysis, enabling only a disaggregation of results by head of household. While this is useful, it is important to keep in mind that this type of disaggregation does not tells us more than the differences and commonalities the households headed by a man or by a woman. It does not inform about gender relations more widely, i.e. between women and men more generally and at different stages of their lives–for example between boys and girls, or between married women and men.

Both male and female heads of household are a distinct category of man or woman, and when a household is headed by a woman this is often due to specific circumstances such as the seasonal or permanent out-migration, sickness of a husband or polygamy ('de facto' female-headed households) or divorce from or the death of a husband ('legal' female-headed households). Female heads of household often, but not automatically, face exclusion and discrimination in access to resources, but sometimes have more control over resources than, for examples, women living in marriage. Female heads of 'de facto' female headed households often assume tasks and roles their husbands are temporarily or permanently unable to fill, but may then face legal barriers when it comes to making decisions over productive assets, e.g. land, or accessing extension services.

Second, shortlist the indicators to between 1 and 3 per outcome. Others can be added at a later date. To select which indicators will be the initial set, they can be ranked with the community following a discussion around the following questions:

- What are the most important pieces of information that can tell us about the outcome?
- Which indicators reflect the needs of more than one stakeholder group? Indicators may be the same or different for different groups
- 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 or do we need to add one?
- Which indicators can be easily measured at the community level?
- Is there a mix of quantitative and qualitative indicators against each outcome?
- Are there indicators to measure changes in inequalities over time–to measure, e.g. gender and socio-economic gaps in access to land, extension services, education, ecosystem services etc.?

These questions will need to be asked for different stakeholder groups.

Photo: ©CARE Vietnam

BOX 13: WHY IS MEASURING SOCIAL / GENDER GAPS IMPORTANT?

Measuring the evolution of gaps in e.g. access to/ control over resources between different social groups delivers a more accurate picture of social inequalities and their evolution over time than merely measuring an absolute change in numbers or a percentage change in access to/ control over resources by a certain group alone.

As a simple example, an initiative may have achieved a 5% increase in girls' attendance of primary school over 3 years. While we can definitely say that more girls are attending school than at the beginning of the initiative, we may overlook the fact that, over the same period, the increase of primary school attendance by boys increased by i) the same 5% or ii) 10%: While the absolute numbers of girls attending primary school have increased, the gender gap in access to education at the beginning of the project has i) remained the same or ii) increased.

Gender equity measures mean measuring such gaps as part of the baseline and aiming for their reduction over time which, in this case, would have meant a larger increase in access to education for girls than for boys.

INSTEAD OF TRACKING NUMBERS ONLY, ALSO 'TRACK THE GAPS!'

Finally, present the shortlist of indicators to all groups, and negotiate a final set. It is important that the indicators are meaningful to those who need the information (see Step 1–Map stakeholder information needs) and those who will be collecting the information (see Step 3–Developing indicators). This means not only selecting indicators that are 'the most scientifically rigorous,' but instead selecting indicators that are based on local knowledge and experience. Tool 1, shared learning dialogue, can assist in this negotiation. Here it is important to note that it may make sense to complement the local knowledge gathered by community members with scientific data, particularly related to projected climate changes. Otherwise, we run the risk of planning for current climate change only.

Once decided on, the indicators should be added to the M&E framework. The example from the CARE Milestones and Indicators for CBA Framework is continued in Table 6 below:

TABLE 6: M&E FRAMEWORK SHOWING EXAMPLE OUTCOME INDICATORS

Outcome	Outcome indicators	Baseline
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)	
Households are practicing conservation agriculture	% households using conservation agriculture practices	
Households are employing a mix of agricultural and off-farm livelihood strategies	% Households with non-agricultural income sources % households with three or more different income sources	
Tracking climate changes		
Rainfall Flooding	Amount of rainfall Peak flood levels Rate of river flow Duration of floods	
Tracking social changes		
Access to extension services Access to education	% change in gap in access to extension services by women and men % change in girls/ boys education	

**NOTE–To support a gender-differentiated analysis, 'households' needs to be disaggregated further, in a way that fits the initiative and context, but, as a minimum, between men/ women.*

Indicators can and should change as the CBA process evolves with changing climate, socio-economic, ecological and political governance contexts. They are first formulated at the initial planning stage, but are reflected on and negotiated throughout the CBA process through PMERL. New indicators can be added while others become less relevant. Every time there are changes to indicators, the monitoring plan (see Table 4) will need to be updated.

Any changes in indicators need to be tracked in order to ensure accountability. This is so we can answer the question, 'are we achieving what we set out to achieve?' (see Section 1). One way is to ensure all monitoring plans are dated and stored. Another useful tool is an 'indicator log,' which logs key changes over time. It should be filled out at the start of the PMERL process and added to every time an amendment is made. It is important that records are kept of how and why indicators are adjusted or changed in order to justify changes in CBA strategy to stakeholders including donors.

KEY QUESTIONS:

- What are the most important pieces of information that can tell us 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 the poorest and marginalized groups including women?
- Do we need to adapt or change any indicators over time?

USEFUL TOOLS:

Tool 1: Shared learning dialogue
Tool 4: Envisaging future climate scenarios

BOX 14: GENDER AND M&E: USEFUL RESOURCES FOR CBA PRACTITIONERS

QUICK OVERVIEW
IUCN Factsheet: Gender Indicators
http://generoyambiente.com/arcangel2/documentos/409.pdf

COMPREHENSIVE GUIDANCE ON GENDER-SENSITIVE QUALITATIVE AND QUANTITATIVE DATA COLLECTION AND ANALYSIS
WFP Thematic Guideline on Integrating Gender into Vulnerability Analysis and Mapping
http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp197271.pdf

GENDER ANALYSIS AS A BASIS
CARE Good Practices Framework for gender analysis (working draft): http://pqdl.care.org/gendertoolkit/Pages/understanding%20change.aspx

GUIDANCE ON MEASURING CHANGES IN GENDER RELATIONS OVER TIME
CARE Gender Toolkit: tools and guidance for monitoring change in gender relations
http://pqdl.care.org/gendertoolkit/Pages/understanding%20change.aspx

MORE ON INDICATORS
BRIDGE Cutting Edge Pack on Gender and Indicators
www.bridge.ids.ac.uk/go/bridge-publications/cutting-edge-packs/gender-and-indicators

STEP 4: MEASURING BASELINES

Once indicators have been developed, the 'baseline' for each indicator needs to be recorded. Baselines are the first measurement of each indicator–this is the starting point from which subsequent change will be measured. They answer the question 'where are we now'? Which is important if we want to later monitor 'where have we reached?'

Setting baselines should be done before the CBA project begins. It is essential to ensure that the baseline information is well documented and stored (for future comparisons to be made).

TO RECORD BASELINES FOR QUANTITATIVE INDICATORS:

- Record measurements. Measure or count the indicator at the starting point. Mapping (see Tool 6) and visual tools (see Tool 7) are a useful way of adding meaning to quantitative indicators.

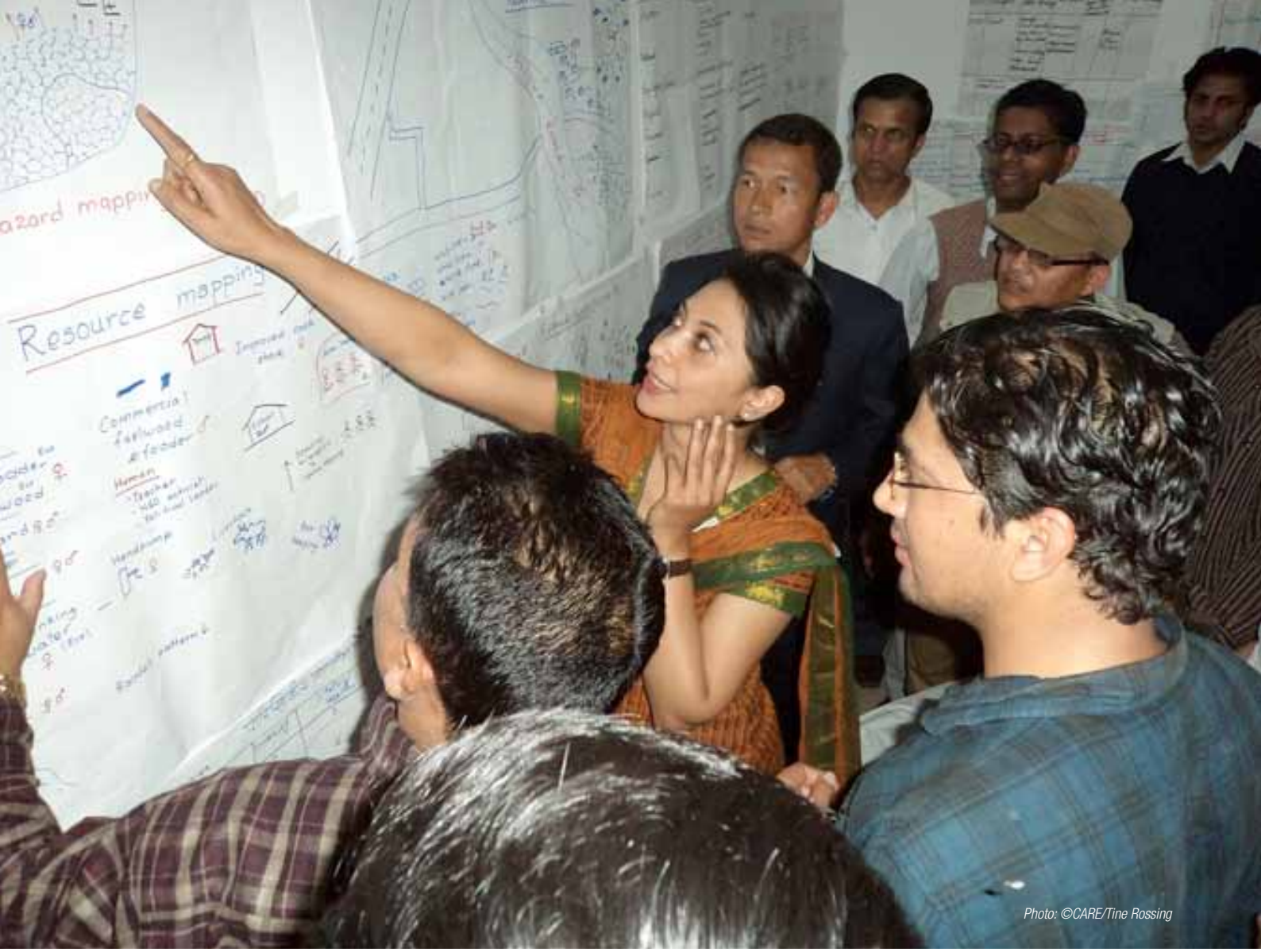


Photo: ©CARE/Tine Rossing

TO RECORD BASELINES FOR QUALITATIVE INDICATORS:

- Record descriptions. Interviews and focus group discussion are a useful way of building a picture of the current situation. For setting descriptive baselines, it is useful to encourage participants to think about how they would like to see the outcome in the future, and then to describe the same features of the change they envisage in the existing situation. Tool 4, Adaptation Visioning, is useful here and an example is presented in Box 10. Maps and visual tools are a good way of taking a 'snapshot' of the current situation and can be used for very specific indicators or getting a bigger picture of areas of change (Tools 6 and 7).

What if we don't know what we are looking for yet? As noted, some indicators will emerge as important only once the CBA process has begun. This is especially the case for Type 3 information around behavioural changes. This means that some baseline data may need to be added retrospectively. This can be done at any stage in the process when a new indicator emerges as important. It requires collecting as much information as possible about 'what was the situation like before'? (Before the CBA process began). This can include:

- Pre-existing 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 for retrospective baseline setting, using qualitative methods such as interviews and focus groups to ask people how much things have changed and since when.

- The 'most significant change' approach (Tool 8) is a useful exercise to undertake with different stakeholder groups.

To set baselines for climate change indicators we need to ensure we record the trends in climate contexts and ecosystem changes (Type 2 information, see Step 2). This is to ensure that we can track progress against a changing climate context (see Section 1 and Section 3). This means:

- Use tools that record changes in climate trends over time (Tool 10 "Hazard response and force-field analysis" and Tool 11 "Trend analysis through time-lines and seasonal calendar").
- When documenting baselines, document them as trends. This can be done descriptively or graphically depending on the type of information and the capacity of stakeholders to interpret it.

BOX 15: 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 that a situation has 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
Safe drinking water (not vulnerable)		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		

TABLE 7: M&E FRAMEWORK SHOWING EXAMPLE BASELINES

Outcome	Outcome indicators	Baseline
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 practicing conservation agriculture	% households using conservation agriculture practices	No households using conservation agriculture practices
Households are employing a mix of agricultural and off-farm livelihood strategies	% Households with non-agricultural income sources % households with three or more different income sources	10 % households with non-agricultural income sources 10% households with three or more different income sources
Tracking climate changes		
Rainfall	Amount of rainfall	Increasing rainfall variability and intensity between 1960-2010
Flooding	Peak flood levels Rate of river flow Duration of floods	River flooding incidence increasing from 1 in 50 year to 1 in 5 year events 1960-2010

**NOTE–To support a gender-differentiated analysis, 'households' needs to be disaggregated further, in a way that fits the initiative and context, but, as a minimum, between men/ women.*

KEY QUESTIONS:

- Where are we now?
- What was the situation like before?

USEFUL TOOLS:

Tool 4: Adaptation visioning
Tool 6: Mapping
Tool 7: Visual tools
Tool 8: Most Significant Change
Tool 10: Hazard map and force-field analysis
Tool 11: Timelines and seasonal calendars

STEP 5: FINALISING THE M&E PLAN, BUDGET AND RESOURCE ALLOCATION

Who will monitor and evaluate changes against baselines and how? How will the information be used, processed and stored? Who does the information belong to?

Different types of indicators require different types of information, which will require different methods for collection and then use. The template below can be used to design a monitoring plan (see Table 8 below). The monitoring plan should be used in conjunction with the progress reporting plan, to monitor all three types on information.

TABLE 8: THE OUTCOME AND CONTEXT MONITORING PLAN OF INFORMATION

Indicator (ie the info required)	Source of info	**Who** will use the info?	Method of collection	**How** will the info be documented and stored?	**Frequency/ timing** of info collection	Responsibility for info collection	**Responsi-bility** for info analysis	Feedback entry-point	Frequency/ timing of feedback
Outcome area 1									
Outcome area 2									
Outcome area 3									
Outcome area 4									
Climate Trend info									

The information to fill in this plan comes from the previous steps. The monitoring plan will be more sustainable if it builds on existing processes of information collection and ensures the type of information collected is targeted at the information users, mapped at the beginning of the process. The plan should be as specific as possible. It includes the outcomes to be achieved, the characteristics to be measured, the time interval between measurements, and the spatial coverage. Information needs to be documented in a way that will reach a wide number of stakeholders (see Box 17). This may include the use of visuals, maps, timelines, and journals (see Tools 5, 6, 7 and 8).

The final plan should be developed with sub-groups of stakeholders, each committing to monitoring and evaluating the indicators of most interest to them:

- With each group, go through implications for time and resource costs of data collection, storage and use to ensure the plan is sustainable.
- Set fixed goals for data collection, analysis and use.

Criteria that can be used to check the suitability of the plan are presented in Box 16. Finally, the M&E plan will need to be budgeted, based on assessing the cost of each activity. Ensure that each element of the M&E plan is costed, including those elements to be undertaken on a voluntary and unremunerated basis by project stakeholders. This will ensure transparency. CARE has a project budget checklist[43] that can be used.

MONITORING, LEARNING, REFLECTION & FEEDBACK

The actual monitoring of information against the monitoring plan involves the systematic updating of baseline data using the same methods used to collect baseline data.

The frequency with which this happens will depend on the type of information being collected, and the choice of method. For example, rainfall data can be collected relatively easily using rainfall calendars track rainfall on a monthly (and sometimes weekly) basis (see Tool 12). On the other hand, time-consuming qualitative methods of data collection may be carried out periodically–for example, Most Significant Change analysis as part of progress monitoring for Type 3 information (Process and Practice) may occur annually.

Once recorded, the information in the M&E and progress reporting plans need to be analysed and reflected on. What changes are occurring? What is working well? What is not working well? How have changes in context influenced results? 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?

THE INFORMATION GENERATED FROM PMERL NEEDS TO BE FED-BACK INTO THREE PROCESSES:

- To inform and revise adaptation planning
- To inform and revise the PMERL indicators and targets
- To inform reporting

BOX 16: CRITERIA FOR CHECKING THE VALIDITY OF PMERL PLANS (GUIJIT, 1999).

VALIDITY: Do the people who are to use the information believe the method is valid? I.e. are they able to assess the desired indicator with enough accuracy?

RELIABILITY: Will the method work when needed?

RELEVANCE: Does the method produce the information required, or is it actually assessing something similar but in a different way

SENSITIVITY: Is it able to pick up data variations sufficiently and be adapted?

COST EFFECTIVENESS: Is it producing useful information at a relatively low cost?

TIMELY: Is it likely to avoid delay between information collection, analysis and use?

The most crucial question is clarity about end users and end uses of the information.

BOX 17: SOME GOOD PRACTICES FOR DOCUMENTING EVIDENCE.

Is the documented evidence:

- **Clear**
- **Simple enough to be used with minimal training by the stakeholders doing the documenting?**
- **Brief, requiring minimum time**
- **Using visuals and timelines**
- **Familiar to end users**
- **Accessible to all stakeholders**

One way of doing this is to hold regular 'feedback meetings' to 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 in Box 19.

The CARE Adaptation Learning Programme for Africa (ALP) recommends 'Quarterly Refection Meetings' in order to achieve continuous learning and reflection (see Tool 13). The purpose of these meetings is:

> *'To provide an opportunity for all team members and other relevant community, NGO and government stakeholders to contribute to reflection and analysis of progress and achievements; decision making and planning of activities.'*[44]

It is important that all those stakeholders identified in designing and undertaking PMERL (all those identified in Step 1) are present at the meeting. This will range from representatives of the most vulnerable groups, through to service providers responsible for facilitating CBA plans and enabling (or not) adaptation.

Meetings need to be carefully facilitated. The presence of so many stakeholder groups, with very different levels of access to power and resources, means that the voices of the most vulnerable groups may be missed. One way of doing this is to hold 'phased meetings':

- First, hold small-scale community level meetings with different livelihood and gender groups. These can be focus-group type discussions that should minimise the impacts of people's time and resources. The purpose is to access those voices that may not be well represented in larger forums–however these may also be those who may be last able to give time to participatory processes. These meetings should be facilitated by the Monitoring Team. The purpose of the meetings is to draw out the key messages that are important to each group. Questions should cover all three types of information:
  - How do changes in indicators of adaptive capacity relate to each stakeholder group? Which changes matter and to whom?
  - What do changes in climate trends and ecosystems mean for each group? Do they matter? Are women/men/boys/girls responding? Are the most climate-vulnerable groups responding? How? If not, why not?
  - How satisfied is the group with the activities that have been undertaken during the CBA plan? What has gone well? What could be improved?
- Work with each group to prioritise 'key messages' around each type of information. Then, during larger multi-stakeholder reflection meetings (see Box 18 and Tool 13). These key messages can be presented by the monitoring group and form the basis of debate. In this way the voices of marginalised groups are given a reliable platform to voice concerns and demands.

However, these meetings are time and resource intensive not just for participants but also for facilitators. Realistic plans need to be set from the start about how often different feedback methods can be employed and for what purposes. Multi-stakeholder meetings are one way of engaging actors at different levels in the outcomes of the M&E process–by bringing decision-makers to PMERL forums. A second way is to bring the outcomes of M&E to decision-making processes. This means strategically integrating PMERL outcomes into local CBA planning processes.

BOX 18: CLIMATE CHANGE PREPAREDNESS WORKSHOPS BY INDIGO.

The Community-based Climate Change Adaptation in Africa (CBAA) programme (www.indigo-dc.org) uses periodic Climate Change Preparedness Workshops for farmers and other stakeholder across different CBA projects in the programme. Workshops are conducted every three months, providing a platform for reporting back CBA project findings to the larger community, to share ideas between farmers and scientists, and plan next steps. The workshops fulfill a host of 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 those for understanding, learning, inclusion and identity, which is crucial to maintain the momentum of the process.

Parallel workshops are also held for children, an idea that emerged from the evaluation of the workshops themselves. The innovation has been taken up with lots of enthusiasm by children and provides a platform for them to learn about climate change actively, while adults can focus on the CBA planning and learning process. This creates rich opportunities for learning about perceptions across generations.

Photo: ©CARE/Ximena Echeverria

This requires first assessing decision-making patterns and planning cycles can be undertaken during the stakeholder analysis of Step 1. It is important to ask:

- **WHO** is making the decisions?
- **WHAT** information is decision-making based on?
- **HOW** can PMERL be integrated into this decision-making?

The answers to these questions will be different for different types of stakeholder, and so the approach to presenting and integrating information will also need to be tailored to 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. Another option could be brining in local schools. Capacitating schools with resources and knowledge to monitor changes, and encouraging regular feedback to the wider community, could help build longer term sustainable monitoring systems.

With regards to formal systems, local policy makers may have 1-year, 3-year, or 5-year planning cycles, and decision-making might be informed by village or district level council meetings.

TABLE 9: AN EXAMPLE OF AN 'ENTRY POINT' ANALYSIS OF M&E INFORMATION FOR LOCAL ADAPTATION PLANNING IN NEPAL[45]

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 & 5 year planning cycle	Invite Village Council members in 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	One on one 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 (DCCCC) planning cycles	Attend periodic sharing meetings at village level
Operational plans revised every 5-10 years	Public and Social Auditing	Annual VDC Council meetings
Annual Auditing System for registered CBOs (in which indicators can be integrated)		LAPA file prepared in each Village level office and regularly update with M&E outputs
Informal discussions with local community stakeholders		Public and Social Auditing processes in place at the village level

The information from PMERL also needs to be used to reflect on the PMERL system itself. For example, as new information emerges about unexpected factors that turn out to be important in influencing change, or where change takes place at surprising rates. This requires new indicators to be added to the framework. Some indicators may turn out to be less important and can be un-prioritised. Many targets may need to be re-set in light of changing contexts that makes some goals more difficult to achieve than at first anticipated. Stakeholders will also change, for example as people move in or out of the area, as new organisations come and go. Further, some people will move out of the 'most vulnerable' category while others may move in, particularly as indicators change.

Therefore there needs to also be periodic review of the PMERL system. This should be built into the plan frequently enough to ensure the PMERL system stays relevant, but not so frequent to become burdensome. This might be once a year, plus whenever significant unanticipated changes occur or information emerges. Responsibility will need to be taken for updating the PMERL framework. The facilitator, who is in a good position to work periodically with the different stakeholders to understand and reflect-back the changes into the framework, could take this responsibility.

INTEGRATING PMERL OUTPUTS INTO REPORTING PROCESSES

While the PMERL framework is designed primarily to meet the learning and information needs of vulnerable communities, the information that emerges from the process is valuable for organisations supporting CBA. It helps us to understand how effective CBA is.

Although all indicators are context specific, PMERL provides a systematic approach to establishing domains of change that can bring consistency across very different CBA projects, to inform lessons around what CBA 'looks like,' and how it is best supported. This is particularly important, as 'good evidence-based documentation of scalable [CBA] practices constitutes a precondition and point of departure for the process of successfully bridging different levels and actors and scaling up and out CBA practice itself.'[46]

The emphasis on participatory processes means that much of the information generated will be subjective and designed to meet the needs of vulnerable people and not objective external reporting. Many NGOs and local field offices will have their own systems of reporting place. Yet, service providers are also planning under uncertainty, and existing reporting frameworks are often not designed with the flexibility and feedback mechanisms in place to learning from and respond to uncertainty. PMERL provides a systematic way for organisations supporting CBA to account for change. For example, for organisations that commonly report against logframes, unanticipated changes are put down as 'risks' to the project cycle. Instead, PMERL allows the learning from anticipated changes to be actively incorporated back into the project cycle–moving them from the 'risk' box into the 'indicators' box. This makes for more active and positive reporting whilst also supporting much needed responsive planning at the local level.

[36] www.careclimatechange.org/files/toolkit/CARE_CBA_Toolkit.pdf
[37] www.careclimatechange.org/tk/cba/en/
[38] Kusek, J.Z., and Rist, R.C. 2004. 10 Steps to a Results-Based Monitoring and Evaluation System. The World Bank. www.oecd.org/dataoecd/23/27/35281194.pdf
[39] www.careclimatechange.org/tk/cba/en/
[40] Brooks et al., 2011. Tracking Adaptation and Measuring Development. IIED Climate Change Working Paper 1. See also Lamhauge et al., 2011. Monitoring and Evaluation for Adaptation: Lessons from Development Cooperation Agencies. OECD, Paris.
[41] Ribot, J. C. 2010. Vulnerability does not just fall from the sky: Toward multi-scale pro-poor climate policy. In Mearns, R. and Norton,A. (eds.) Social Dimensions of Climate Change: Equity and Vulnerability in a Warming World. Washington, DC: The World Bank.
[42] www.careclimatechange.org/cvca/CARE_CVCAHandbook.pdf
[43] www.careclimatechange.org/files/toolkit/CBA_Budget.pdf
[44] CARE ALP, 2011. Quarterly Reflection meeting Guide. CARE/ALP, November 2011.
[45] Ministry of Environment and Ministry of Local Development, Government of Nepal (2011). The LAPA Framework–Local Adaptation Plan for Action. Summary of steps, key actions and tools. A short description of the steps, actions and tools recommended for carrying out and implementing LAPA.
[46] Rossing, T; Otzelberger, A; and Girot, P (2012 forthcoming), Scaling-up the use of tools for community-based adaptation: Issues and challenges.' In forthcoming Earthscan/Routledge book on scaling up of adaptation.

SECTION 3: **TOOLS FOR PMERL**

GUIDANCE ON SELECTING TOOLS

However, practitioners of CBA will already have many tools used for participatory research that can be adapted for use in PMERL. The tools presented here are a small selection, and suggestions only.

WHEN SELECTING TOOLS, KEEP IN MIND THE BASIC COMPONENTS OF THE PM&E PLAN:

- What is being assessed?
- Who will collect the information?
- Who will use the information and how?
- What are the time, capacity and resource requirements of each tool?

Suggestions for tools against each step of the PMERL cycle:

PMERL steps	Suggested tools
2.1 Establishing an PMERL team	Tool 1: Shared learning dialogue
2.2 Design a PMERL plan	
Step 1: Map stakeholder information needs	Tool 2: Service provider analysis
Step 2: From information needs to outcome statements	Tool 2: Service provider analysis Tool 3: Adaptation visioning Tool 4: Envisaging future climate scenarios Tool 5: Mapping behavioural changes Tool 10: EXSECO, an interview tool Tool 11: Hazard and response force-field analysis
Step 3: Developing indicators	Tool 1: Shared learning dialogue Tool 4: Envisaging future climate scenarios
Step 4: Measuring baselines	Tool 3: Adaptation visioning Tool 6: Mapping Tool 7: Visual documentation of PMERL Tool 8: Access, use and control (gender tool) Tool 9: Most Significant Change Tool 11: Hazard map and force-field analysis Tool 12: Timelines and seasonal calendars

TOOL 1: SHARED LEARNING DIALOGUES[47]

Responding to climate change requires approaches that bring together global and local sources of knowledge. Climate change is a global process with specific local impacts. Both global scientific information and detailed knowledge of local contexts are essential to develop effective adaptation responses. Local communities and the array of national and international actors involved in developing responses to climate change speak very different languages and approach problems very differently. This means that techniques for blending local and global understanding are essential, and the shared learning dialogue[48] (SLD) approach has been developed to do this.

The concept of the Shared Learning Dialogue is founded on recognition that local and global actors need a common understanding of what can be done in specific situations. Developing common understanding requires learning and this learning must be shared. The learning cannot be generated through top-down or bottom-up approaches alone, and because the actors involved come from very different perspectives, understanding needs to be developed through dialogue. This dialogue is a multidirectional process in which all actors engage in multiple interactions over time towards common understanding. The process requires an emphasis and openness to learning by all participants. The SLD process moves from an initial phase where participants lack common understanding, through intermediate phases where issues are explored, to a final phase where all participants have the broad base of common knowledge required for agreeing courses of action.

STEP 1: The process needs to be designed and facilitated in a way that encourages interaction and awareness of the information different groups offer. From the beginning, it is essential to identify the key individuals and groups that need to be involved and mechanisms for ensuring all their voices are heard. It involves the participation of diverse communities, including the most vulnerable groups within an area. It must also encompass the array of technical, scientific, government and other actors who bring knowledge of global processes to the local level. Global information that is shared with the community includes everything from down-scaled climate information and regional hydrology to the policies and activities of government. Concepts that may prove challenging need to be introduced early on. For example, understanding needs to be developed regarding both what is relatively well known, such as changes in temperature, as well as the large uncertainties surrounding other changes that may occur. The carefully structured two-way discussions make use of a range of participatory tools and needs to be facilitated by individuals with strong, culturally-sensitive communication skills.

STEP 2: Once an initial level of understanding has been developed, the SLD process often focuses on specific areas of concern or areas where understanding is particularly weak. In such areas, supporting materials that bring in new information are important. The SLD process involves repeated interactions between local groups, government actors, NGOs and others, to develop common understanding.

STEP 3: As major challenges and needs are gradually clarified, the dialogue shifts towards identification of potential CBA interventions. Practical responses to climate change are developed through both reflection and action. Shared learning iterates between analysis and understanding, and the types of action that generate new insights.

STEP 4: Information from monitoring and evaluation is also shared between the local and scientific communities. This stimulates dialogue that leads to learning. This in turn shapes planning.

STEP 5: Shared learning is continuous with new climate information always arising from both the local and the scientific community and information being shared around community adaptation strategies. Monitoring information continually generates learning that feeds into future planning cycles.

TOOL 2: SERVICE PROVIDER ANALYSIS

It is important for communities to understand the key actors that influence CBA and their interest in adaptive capacity. Key supportive actors are organisations and position-holders who support either the development of the community adaptation planning or delivery through provision of goods and services. They are commonly people or organisations who affect or are affected by adaptation funding and policies. It is often useful to know where their interests lie and what their priorities are. It is also helpful to understand the relations between them and how they can be influenced. Communities can carry out such an analysis to inform their target setting, planning, monitoring and reflection. Their initial analysis forms a baseline against which subsequent analysis can be compared. Such analysis can be carried out in different ways. Various forms of institutional analysis are useful to be conducted with different social groups (e.g. gender groups, different socioeconomic or ethnic groups) and then compared, to improve understanding of enabling and hindering governance factors.

KEY SUPPORTIVE ACTOR ANALYSIS

STEP 1: Communities identify the key supportive actors, both those that can support with facilitation and capacity building and those that are the more conventional service providers. They discuss what their interests are and what motivates them. They then identify what roles they play with regard to increasing adaptive capacity. It is useful to clarify what importance they have and what their influence is. It can be helpful to categorise the key supportive actors as most, medium and least significant in terms of contributing to building communities' adaptive capacity. Criteria (which can become indicators) are identified during the discussion. It may be important to distinguish between their significance in the short and longer term. It is important to also identify the relationships amongst the key actors. All of this can be represented on an annotated Venn diagram, or a matrix can be drawn up. This is a useful baseline.

STEP 2: Based on the adaptation needs identified by the community (specifically the most vulnerable groups) and their plans for adaptation interventions, participants clarify what roles the key supportive actors could additionally play. They develop a strategy to engage with the actors to both better access existing services/resources and request that they provide additional ones. Targets for changes in supportive actors are set and monitored against by the community (link with outcome journal). The community reflects on the changes and incorporates the leaning into a revised strategy of stakeholder engagement.

COMMUNITY-BASED (GATEWAY) SERVICE ANALYSIS

This tool helps communities discuss the importance of various services in increasing adaptive capacity and for them to clarify which would be priorities to request or demand from local or district service providers.

STEP 1: Community members draw existing services in their locality (provided by government, NGO or private sector) on a Venn diagram and record whether each service is, in practice, available to the most poor, medium poor and least poor (or vulnerable) households. They also indicate whether physical access impacts their use of the service. This provides a baseline, against which the community compares findings from subsequent analyses. It provides information for use in setting monitoring and change targets.

STEP 2: Cards are made of all the services identified and community members cluster them according to their importance in increasing adaptive capacity. Generally, four or five categories are identified. It may be necessary to distinguish between short and long term increases in adaptive capacity. Participants then add new cards of a different colour for services they do not currently have, but believe to be important for increasing adaptive capacity. To help people visualise beyond everyday needs, so it is effective to do this after envisioning high adaptive capacity. Facilitators need to ensure discussions focus foremost on the most poor and vulnerable. This too provides a baseline, against which to measure changes in access to services that increase adaptive capacity. Subsequent reflection and learning feed back into community plans.

TOOL 3: ADAPTATION VISIONING FOR SELF-MONITORING AND EVALUATION

This tool enables communities to use their vision of high adaptive capacity to inform adaptation planning. Overall categories can be derived, for example, from the recently developed Local Adaptive Capacity (LAC) Framework by ACCRA.[49] Given the variability in climate change effects and local contexts, meaningful indicators of adaptive capacity can often only be identified and measured locally. This tool allows that process to be in the hands of the communities that are developing and implementing adaptation plans. Rather than identifying indicators from a focus on vulnerability this tool works back from the vision of high adaptive capacity and therefore tends to provide a more complete set of indicators. 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.

STEP 1: Having used other tools to explore climate change impacts, local vulnerability and existing response mechanisms, the group envisions 10 or 20 years ahead. They imagine what high adaptive capacity in their household and their community would look like. Individuals call out their ideas and draw them on cards, which are compiled to form a collective vision. These become the criteria (or indicators) against which the community and other stakeholders evaluate the effectiveness of adaptation efforts. If the indicators are represented as pictures, less literate members are fully included. The discussion during this process clarifies perceptions and arrives at the common understanding required for later evaluation.

STEP 2: The indicators are commonly arranged in a matrix to be scored on a four-point scale. The scale might be in terms of phases of the moon, with a new moon representing beginnings and a full moon representing that a situation has reached its potential. The assessment of current status effectively stimulates discussion and sets a baseline for targets for the next round of planning. Indicators can be ranked in terms of climate hazard priorities and availability of resources.

If this process starts with small common-interest groups, the indicators and status assessments from all the groups are then combined during a large community meeting with further dialogue. Indicators are reviewed for overlaps and omissions. Some are refined or quantified to make them less ambiguous and more sensitive to change. Community organisations may carry out their self-monitoring more quickly and less inclusively by holding a meeting with representatives from each hamlet or interest group and then feeding back in an assembly. This can also happen at the level of local networks and committees.

STEP 3: The groups periodically (commonly every 6 months or annually) monitor themselves against these indicators and reset their priorities, plans and activities. The indicators and process can evolve over time to respond to changing local conditions and priorities.

Tool 3 Example: Members of the Water Users and Sanitation Committee in Garunse village of Rauta VDC identified the following qualities/indicators of high adaptive capacity through visioning. They identified the current status for each of them, and this forms a baseline for adaptive capacity.

Aspects of vision (indicators)	1 New Moon	2	3	4 Full Moon
Income generating activities (e.g. fish or vegetable farming)	X			
Good health–a health post which is nearby and staffed				
Suspension bridge for access during monsoon floods				
Vehicle road				
Stable employment	X			
No need to migrate for work				
Awareness and information on a range of opportunities	X			
Electricity for mill and light				
Forest thick and green (access to all required products)		X		
NTFP in forest empty spaces (income)	X			
Education of children to Shared learning dialogue (SLD)	X			
Education of adults (functional literacy)				
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		

Source: Nepal Water for Health (NEWAH)

TOOL 4: ENVISIONING FUTURE CLIMATE SCENARIOS AND IMPACTS OF CLIMATE CHANGE[50]

Given the uncertainty of climate change effects on a particular locality, it is useful for a community to envision the range of impacts, which they may experience over different time-scales. In a typical envisioning exercise people extend their own past experiences into the future. However, with climate change conditions may well evolve in ways that have never previously been experienced in that locality. This tool helps vulnerable groups understand the effects and impacts that they may experience, and assists local communities and service providers in understanding the implications of climate change for local adaptation planning. It provides information for baselines and informs reflection and learning towards increasing adaptive capacity.

STEP 1: A facilitator with a clear understanding of what is known about climate change and the areas where projections are highly uncertain or cannot be made, guides the process. The community clarifies time horizons. It is suggested that they anticipate changes and impacts over the short-term (up to 10 years), intermediate-term (up to 30 years) and long-term (up to 50 years).

STEP 2: A table helps 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, such as temperature, are listed first. Areas where uncertainty is high, such as precipitation, changes in storm intensity, or the frequency of floods, are in the 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.

Climate Parameters	Current	Short-Term (10 year)	Intermediate (20 year)	Long-term (50 year)
Winter				
Temperature	Current–at location	+2°C average + 3°C peak	+3°C average +4°C peak	+4°C average + 5°C peak
Snow line	Current–at location	+500m average and melts faster	+1,000m average and melts faster	+1500m average and melts faster
Storm frequency	Current–at location	A bit more uncertain than now	Much more uncertain than now	Completely uncertain
Rainfall	Current–at location	More variable +-?	Very variable?	Highly uncertain
Summer				
Temperature	Current–at location	+2°C average + 5°C peak	+3°C average +7°C peak	+4°C average + 10°C peak
Snow line	Current–at location	+1,000m average and melts faster	+1,500m average snow disappearing from peaks	+3,000m average no snow visible
Storm frequency	Current–at location	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	Current–at location	Very variable?	Highly uncertain	Highly uncertain

STEP 3: Once a basic table outlining the range of expected climate conditions has been constructed, different scenarios can be separated out. These scenarios reflect both the median and potentially more extreme changes in parameters where uncertainty is high. For example, if precipitation is expected to change but uncertainty is high, three scenarios might be considered reflecting the greatest decrease, the greatest increase, and no change in precipitation.

STEP 4: Participants then 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 their livelihoods, their roles in them, their environment, the social systems and the infrastructure/services on which they depend. Use is made of 'what if' questions. It can be helpful to draw pictures or maps to illustrate impacts to facilitate discussion. Such discussion should also identify areas where impacts on one system could affect another system. For example if electricity generation is vulnerable to floods, then problems can also be expected for communication systems or agriculture that depends on pumped water. This step results in identification of areas where vulnerability is anticipated in basic systems under different climate scenarios. These will become the focal point for community discussions around options for adaptation planning at community or district level (i.e. baseline and targets). Here is an example:

Climate parameter	Scenario	Effects	Impacts on local people and environment [can make 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.

STEP 5: The scenarios are periodically revisited in the light of local experience and new scientific information. The changes in the scenarios themselves, and the comparisons of what was envisaged and what came to pass, are reflected upon in the community. Learning feeds back into immediate planning and revision of the main scenarios.

EXAMPLE: ASSESSING THE VULNERABILITY OF WATER SYSTEMS

Mapping the main water systems in an area would include 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, asking 'How does the irrigation system function in a typical summer? Where is it functioning well? What are the problems?' The reasons why a system does or does not function are explored. 'Is it due to a physical issue such as the 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 where the systems are strong and where they are fragile or have clear points of physical or institutional weakness. This is followed by consideration of how the systems would respond under the future scenarios in the different time-scales. For example, 'How would the irrigation system function if five years from now it was 5° warmer and much wetter than at present during the summer?' Running through a series of questions such as this, provides clarity on the functioning and challenges irrigation and other water systems may face in the future.

TOOL 5: MAPPING BEHAVIOURAL CHANGE JOURNALS

This tool is used for monitoring outcomes in terms of behavioural changes that contribute to increased adaptive capacity of communities. These are outcomes related to changes in the behaviour, relationships, policies, activities or actions of the people, groups and organisations involved in CBA. These outcomes can be logically linked to CBA interventions, although there are likely to be other contributory factors. This journal is a modified element of Outcome Mapping[51] that helps focus on behavioural changes of communities themselves and key actors involved in the facilitation of CBA development or in the delivery of resources and services for implementing adaptation interventions. Facilitators and community groups keep an anecdotal record of any events or changes related directly or indirectly to progress markers. These markers are indicators of the changes that the CBA programme or the key group that should benefit from the project (i.e. the most poor and vulnerable households) would incrementally 'expect to see' and 'love to see.'

The journal is most useful over the long term, as changes in behaviour often develop slowly, and it takes even longer to see their impacts. The journal provides evidence of long-term changes in the adaptive capacity of households and communities stimulated by adaptation planning and funding. The journal also provides a means for measuring surprising or unanticipated outcomes that can inform learning around CBA and feed back into planning cycles.

STEP 1: Participants establish who the main actors are and what changes in their behaviour would facilitate CBA. The following table has been found useful for this.

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 of actors in terms of 'expect to see'and 'love to see')	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. Both are valid so long as they are explicit.

STEP 2: A journal is prepared for each key actor in order to record both anticipated and unanticipated changes over time. The expected behavioural changes from column two above are entered on the first page. The progress markers are entered on the second page. Facilitators help groups decide what would constitute high, medium and low levels of change.

OVER THE WEEKS AND MONTHS ANY RELEVANT OBSERVATIONS ARE RECORDED IN THE JOURNAL, USING THE FOLLOWING FRAMEWORK:

- Description of the change (anticipated or unanticipated)
- Significance of that change
- Contributing factors (It is important to recognise that there may be several factors that have influenced actors and contributed to the change in addition to what has been done directly under CBA.)
- Sources of evidence
- Lessons, responses and required programme changes.

STEP 3: The facilitators and groups reflect regularly on the changes recorded in the journals. They consider progress through the expect-to-see indicators towards the love-to-see indicators. They reflect on the lessons identified and the programme changes suggested. They share with the wider community and make amendments to adaptation interventions to further encourage or influence change. They also share findings with funders and policy-makers.

TOOL 6: MAPPING

Whether a map is formed by satellite imagery or sketched by community members, it provides a visual representation of the features that are key to Community-based Adaptation. Maps are used throughout the CBA process, for steps such as awareness-raising or establishing a vulnerability baseline. They are used for identifying climate hazards, vulnerable households or groups, and vulnerable resources, structures and systems. They are used in visioning a future of higher adaptive capacity and for setting monitoring targets. Maps provide a visual focus whilst reflecting on progress and are helpful in sharing learning and providing feedback. Often it is the participatory process of mapping which is most useful, as it stimulates discussion and, through dialogue, participants arrive at clarity and consensus.

MAPS AND MAPPING PROCESSES ARE ESSENTIAL FOR MANY ASPECTS OF THE PMERL AND CBA DEVELOPMENT:

- **BACKGROUND INFORMATION:** Maps visually represent basic information such as population distribution, administrative boundaries, current land uses or natural resources, in a way that can be accessed rapidly. This is useful for CBA planning and for settling monitoring and evaluation objectives.

- **GATEWAY AND CORE SYSTEMS IDENTIFICATION AND STRUCTURE:** Mapping is central to understanding the structure of systems such as energy, water, communication, transport, and ecosystems. The process of mapping facilitates discussion of the resilience and vulnerability of key services, structures and systems, and where monitoring should be focused.

- **VULNERABLE COMMUNITIES:** Participatory sketch maps enable identification of households and communities that are vulnerable. They can be used to highlight both physical vulnerability to climate impacts and hazards, and the social factors that enhance that vulnerability. This establishes a vulnerability baseline against which future vulnerability maps are compared.

- **VISIONING HIGH ADAPTIVE CAPACITY:** After mapping the current situation, communities can then map, either on top or separately, what their vision of high adaptive capacity would look like. This vision becomes the long-term goal of adaptation planning and which will inform the setting of PMERL objectives and indicators. Steps towards the goal area mapped out and inform annual or periodic plans.

- **CLIMATE CHANGE IMPACTS:** Maps are an important tool for understanding the exposure of both systems and populations to the potential impacts of climate change. It can be effective to combine GIS images with participatory sketch mapping. Such maps can show changes over time, such as retreating snow lines or expanding areas affected by landslides, in a way that is easily understood by communities and related to their own experience. Maps are used to help visualise the effects and impacts of various climate scenarios, and thereby inform the scope of planning and monitoring.

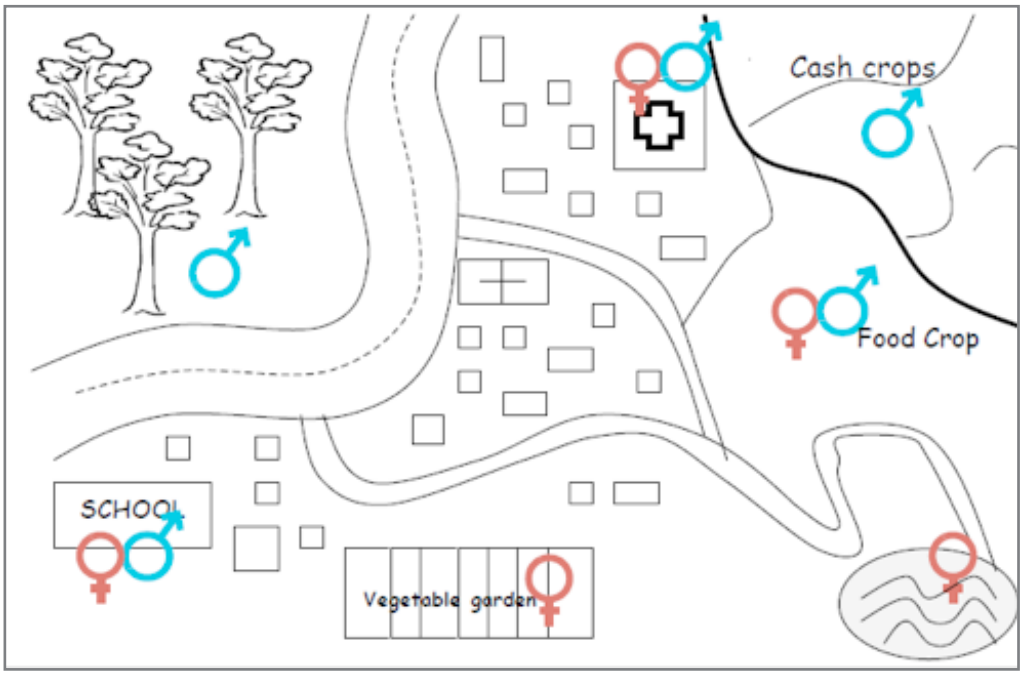
- **SOCIAL AND GENDER DISAGGREGATION:** In participatory sketch mapping, using agreed-upon symbols assigned to different social groups in a given community, access to certain resources, infrastructure or livelihood activities helps visualising social and gender relations on the map (see example of community asset map below). Similarly, the impact of hazards affecting the community on different groups can be visualised in this way. This can provide a useful tool for analysis of social relations, the identification of marginalised and excluded groups, and for the identification of strategies to reach and include the appropriate people in CBA.

- **VISUALISING INTERVENTIONS:** Maps that identify patterns of exposure to climate are useful for visualising 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.

- **REPRESENTATION AND MONITORING OF AGREED INTERVENTIONS:** Once decisions have been made, maps are a basic tool for documenting the location and many of the details of different actions to build resilience.

- **REFLECTION, LEARNING AND FEEDBACK:** 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. The resulting learning is fed back into discussions around planning and budgeting.

INTEGRATING GENDER IN PARTICIPATORY MAPPING: An example community asset map from World Food Programme's Thematic Guideline on Integrating Gender into Vulnerability Analysis and Mapping (World Food Programme [WFP] 2005, p. 21):



TOOL 7: VISUAL DOCUMENTATION FOR PMERL[52]

Photography and video effectively capture a moment in time within the adaptation process, and thus can be used to document various situations, activities and impacts where visuals explain more than written text. As well, visual mediums can be used to engage with and include people who cannot read, or who speak a language other than the written documentation. For using photography and/or video within the PMERL process, we recommend the following steps to ensure photography and/or video is not used solely to document the project/programme for people outside the community, but as a tool that enhances learning and reflection for better local adaptation planning and implementation.

STEP 1: PLAN: To use visual documentation effectively, take time with the groups you are working with to plan what visuals are needed to best show the topic. For example, if a community group wants to monitor over time a canal affected by drought, discuss and plan to photograph not only the canal, but the challenges it creates for people that you hope to change through an adaptation initiative (women walking long distances for water, health issues from lack of clean water, crop failure, etc.).

STEP 2: PHOTOGRAPHY/VIDEO: Taking strong images can help the community in understanding, learning from and sharing the situation with others.

STEP 3: PROCESS IMAGES: Taking photos or capturing video is only one part of the process. Be 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 computer hard drive. If the photos will also be used for funders or NGOs, be sure to add your name; details to the photo properties for copyright and credit information.

STEP 4: SHARE: Share the visuals with the community in the context of the PM&E process (workshop, meeting, one-on-one, etc… using laptop, prints, VCD or DVD and a television, laptop and projector, etc).

WHICH STEP TO USE IN PMERL PROCESS:

- **BASELINE MONITORING & SETTING TARGETS:** Use photography and/or video as part of the PM&E process. In working with each group you have defined for M&E activities, use participatory ranking tools to decide which of the set baseline indicators they most want to and can represent visually. To ensure that visuals become an integral part of the PM&E process, incorporate time into the overall schedule to include time for planning, capturing, processing and sharing the images. (Note: Working through the process of determining which indicators to show visually can reveal new knowledge about the group's priorities. Be sure to keep track of the issues raised in discussion for reflection and learning.)

- **REFLECTION & LEARNING:** As part of the overall M&E process, set up a schedule for reviewing the photos or video with the initial target group. The photos or video should be used within the context of the overall reflection process to monitor if the images consistently represent the most important issue for the group, or if this has changed. The images or film can also be shown to other groups and the wider community for a wider discussion on the adaptation process. Having visuals to show can open spaces for dialog and community interest in ways that more scientific data may not. In some cases, the local photos can be combined with GIS information and/or aerial photos for deeper understanding of the situation. Reflection and leaning activities may lead to a decision to change what is being visually documented.

- **EVALUATION:** During the evaluation cycle, the images or video can be used to review the situation over time, and for the community to determine if the adaptation initiative is meeting their targets. Because of the ability of photos and video to capture the situation at a point in time, it can often show the reality more clearly than written documentation, and thus can be a valuable addition to an overall set of data gathered during the PM&E.

WHO FACILITATES:

In the case of visual documentation, often the person/organisation who owns the photography/video equipment facilitates using the tool. However, this step can also be more participatory through teaching community members how to operate the equipment.

STRENGTHS/LIMITATIONS:

Photography and video are valuable tools in showing the reality of a situation in a particular point in time. Having visuals is also often more compelling and easier to understand than written documentation, and can help in engaging those who cannot read or speak languages other than the written data on the initiative. That said, capturing compelling photos and/or video that truly convey the situation requires someone with the capacity to do so. This must be cultivated prior to or part of the PM&E process.

Photography cameras are becoming more affordable, and thus easier to use by field staff. However, there is a tendency and history of using photography as a way to document a project only for external communications use rather than as part of a development process. It is important that this distinction is understood, planned for and committed to as part of the PM&E process to ensure its success.

Video can be powerful in showing a situation but is still less accessible than photography for many organisations. Video is appropriate as a visual documentation for PM&E tool within the PMERL process when you: 1) Have the technical capacity to capture and edit usable video; 2) Are able to use or acquire appropriate technology [for example if you want to show the video at conferences, you must have the ability to capture good audio with a microphone, and camera that can do so]; 3) Have the technical capacity to show the group you are working with on an on-going basis, as well as the wider community; and 4) Have the budget required for capture including the equipment purchase or rental cost, editing the videos on an on-going basis, and showing/distributing the videos.

EXAMPLES

NEPAL: In Raute VDC of Udaypur photos of changes in glaciers and glacial lakes over recent years gave a dramatic illustration of climate change effects at altitude. Video footage of drought in Rautahat was very effective for understanding the unpredictability and variability of climate change effects at the local level.

VIETNAM: Plan Vietnam worked with ethnic minority children in Quang Tri Province in late 2010 to create films that highlighted the impact of the 2010 Hurricane Katsana on their lives, and disaster risk reduction solutions. For example, in Thuan Village, the children promoted storing grain before disaster so they would not have to eat dead animals after flooding, building water tanks so they would have access to clean water when disaster strikes, and having their parents to take them to the free health clinic rather than rely solely on traditional means if they fall ill.

The Participatory Video process was used with the children in the DIPECHO-funded project at the start of a 15-month initiative entitled 'Building Child Centred Disaster Resilient Communities.' In 2011, Plan will work with the children and community to set baselines and develop an adaptation strategy that builds on the information derived through a combination of participatory tools–hazard maps, ranking, focus groups and video. The workshop was lead by an international participatory video facilitator; working with two local filmmakers and an expert on Disaster Risk Reduction who helped the children shoot and produce their final films. Watch the Thuan Village film at www.youtube.com/watch?v=tAmZX1s1Bso.

TOOL 8: ACCESS, USE AND CONTROL[53]

MATERIALS: Flipchart paper, markers, coloured index cards or paper (cut to about 4' x 6')

STEP 1: Introduce the concept of access to and control over resources used by households for their livelihoods. You can do this by having the group define what they understand as 'resource' (in local language). Also look at terms related to decision making such as 'access' and 'control.' 'Why might we need to understand access and control as agricultural workers (e.g. agricultural planners, statisticians, extensionists)?'

STEP 2: Have participants form groups. Groups spend ten minutes brainstorming a list of resources (12-15) that their household members use. Have them draw TWO sets of each resource on the index cards supplied (one will be used for the RESOURCE USE chart and one will be used for the RESOURCE CONTROL chart). An example of cards is shown below.

STEP 3: Each group makes two big charts–one with 'RESOURCE USE,' the other with 'RESOURCE CONTROL.' Under these headings, they draw three pictures of:

- a WOMAN
- a MAN
- a WOMAN and MAN together
- Note: You can also disaggregate further by boy, girl, adult woman, adult man, elder woman, elder man, etc.

STEP 4: Participants work with the USE chart first and sort the resources according to who uses them–MEN, WOMEN, or MEN and WOMEN. They then move to the CONTROL chart and do the same thing. Have each group put its charts up on a wall.

STEP 5: As a large group, have all participants visit each 'household' to learn about their situation. Have a representative from each group present. Allow time for questions and comments.

TIP: The following questions might help stimulate discussion:

- Is it women, men or both that use resources? (e.g. land, livestock, technology)
- Is it women or men who need the resources?
- How do men and women's relations in households and within the community affect their access to resources?
- Which resources do women have control over?
- Is it women, men or both who make the decisions about resources? Why do you think this is the case?
- What might happen to the access and control of resources if someone becomes sick in the household?
  - (Give an example of a member) What might happen to the access to resources (e.g. land) if someone dies?
  - (Give an example of a member) Will it be different for different members of the household?
- How might this affect the household's ability to provide food for itself and others? How will it affect different members' livelihoods? What implications might this have for long-term security in the community (or district or province)?

An example of the resource use and control, as presented by participants to a workshop on HIV mainstreaming Chipata, Zambia is shown below. The chart on the right shows the number of resources controlled by the man in contrast to the number of resources used by both the MAN and WOMAN in the household.

TOOL 9: MOST SIGNIFICANT CHANGE

The Most Significant Change technique[54] (MSC) is a form of participatory monitoring and evaluation whereby multiple CBA stakeholders can be involved in deciding the sorts of change to be monitored and in analysing the data. It takes place periodically and informs subsequent planning cycles. It provides information on impact and outcomes that can be used to help assess the effectiveness of the CBA approach.

The MSC process 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. This could progressively involve the most marginalised and vulnerable people, the relevant community organisations, local level committees, NGOs, and district level committees. In this way local and district level decision-makers gain a sense of what impact has really resulted from community based adaptation.

The tool is complimentary to other qualitative and quantitative tools. It has been called 'monitoring-without-indicators' because it does not make use of pre-defined quantitative indicators, or the 'story approach' because it answers the central question about changes in adaptive capacity through stories of who did what, when and why.

STEP 1: COLLECTING STORIES OF SIGNIFICANT CHANGE

People affected by the CBA process and adaptation interventions are asked:

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

Local facilitators record the stories. This is commonly on 1-2 pages but can also be through video or voice recording. They may need to prompt the discussions about change by relating back to vulnerability assessments, the community's vision of high adaptive capacity and community indicators of change.

STEP 2: IDENTIFYING AND ASSEMBLING PEOPLE WHO INFLUENCE CBA

The facilitators 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–community, local, regional, or national. The facilitators arrange for a small group at the first level to meet to consider the significant change stories collected in Step 1.

STEP 3: SELECTING THE MOST SIGNIFICANT CHANGE STORY

The facilitators ask the group of decision-makers to listen to or read each story, then individually 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 identifies why they selected it. They may also agree on actions they will take to reinforce successful elements and address undesirable outcomes.

The most significant change story from each group is then made available to the next level. Each time the reasons for selecting or not selecting a story are noted. The process reduces a large number of stories considered important at the local level to a smaller set that are important for informing the decisions of people in planning and funding. The intense discussion around which is most significant, including how the change came about and key contributory factors, leads to learning about CBA that feeds back into the planning cycle. Feedback is given to the lower levels and to the original storytellers, particularly regarding the reasons why they were or were not selected.

STEP 4: SHARING THE STORIES

The process often concludes by collating all the stories and creating a document that includes which stories were selected and why. Because at each level of selection, the criteria are recorded and each round is informed by feedback from previous rounds, a picture emerges of the adjustment of adaptation focus and direction in the district. This is useful for the cyclical development of CBA.

STEP 5: REPEATING THE PROCESS

The collecting and selection of stories is repeated regularly to capture and evaluate ongoing change. After some time, the original story sites can be revisited to see whether the change was long-term and what further changes have taken place.

TOOL **10:** EXSECO, AN INTERVIEW TOOL[55]

The DfID/IDRC Climate Change Adaptation in Africa Programme (CCAA) have developed the 'EXSECO' interview tool for assessing vulnerability. The tool comprises a series of question that can be used in household interviews or focus group discussions, or with groups of stakeholder representatives. The questions focus on the concepts of 'threat' (i.e. climate stress) and assets (livelihoods, houses, infrastructure, health, etc.). At the time of the interview, the terms Threat and Asset should be replaced by the specific chosen elements. This section only presents part of the tool–relevant for identifying specific threats in order to monitor them over time. The complete tool also examines sensitivity and vulnerability.

STEP 0: IDENTIFY THREAT AND ASSET TO BE CONSIDERED IN DISCUSSION WITH THE COMMUNITY

STEP 1: EXPOSURE

In your community, what are the factors that make some persons or assets more in contact with the threat? (For example, it could be the distance to the river or elevation of land regarding flooding, orientation of slopes with regard to strong winds of hurricanes and cyclones, practices that make people become in contact with the vectors of an illness)

PLEASE DESCRIBE THESE FACTORS AT THE PRESENT TIME, IN YOUR SPECIFIC CASE, AND ANY PAST EVENTS THAT COULD HAVE WORSENED THESE FACTORS.

PAST ADAPTATION BY REDUCING EXPOSURE

- Have you done anything to shield your asset from the threat or to move it away?
- If yes, what?
- What kind of help have you received and from whom?
- Who made the decisions allowing you to reduce your exposure?

SHORT-TERM ADAPTIVE CAPACITY BY REDUCING EXPOSURE

- Do you have access to timely information about the threat?
- If you were warned in time, could you shield your asset from the threat or to move it away?
- If so, how would you do it?
- What help would you need from others and who would need to decide?

FUTURE ADAPTATION BY REDUCING EXPOSURE

- Do you anticipate to have the possibility, in the future, to shield your asset from the threat or to move it away?
- If so, how would you do it?
- What help would you need from others and who would need to decide?

(IF APPROPRIATE) WHAT IS THE LIKELINESS THAT, IF THE THREAT OCCURS IN YOUR ZONE, IT WILL BE FELT IN THE LOCATION OF YOUR ASSET?

- Not felt
- Slightly felt
- Moderately felt
- Highly felt
- Fully felt

STEP 2: SENSITIVITY

If the threat occurred in your zone (or when it occurs), what would happen (or what happens) to the persons or assets that are exposed to it, that are fully in contact with it?

- What are the factors that cause certain persons or assets, when they are exposed to the threat, to have greater losses than others, or to be more affected (it could be, in the case of flooding, the type of crop or the solidity of housing; in the case of droughts, the type of crop; in the case of an illness, the age of the person or pregnancy)

PLEASE DESCRIBE THESE FACTORS AT THE PRESENT TIME, IN YOUR SPECIFIC CASE.

PAST ADAPTATION TO REDUCE SENSITIVITY

- Have you done anything to make your asset more resistant to the threat?
- If yes, what?
- What kind of help have you received and from whom?
- Who made the decisions that have allowed you to reduce sensitivity?

SHORT-TERM ADAPTIVE CAPACITY BY REDUCING SENSITIVITY

- If you were warned in time of the threat, would you presently be able to make your asset more resistant to the threat, or to choose an option that is less sensitive?
- If so, how would you do this?
- When would you need to be warned?
- What help would you need from others and who would need to decide?

FUTURE ADAPTATION BY REDUCING SENSITIVITY

- Do you expect to have the possibility, in the future, to make your asset more resistant to the threat or to adopt options that are less sensitive?
- If yes, how would you do this?
- What help would you need from others and who would need to decide?

(IF APPROPRIATE) WHAT IS THE PROBABILITY OF FULL LOSS OF YOUR ASSET, OR THE LIKELY PERCENTAGE OF LOSS?

- 0% (no loss)
- 25% (slight loss)
- 50% (moderate loss)
- 75% (high loss)
- 100% (total loss)

The remainder of the tool examines coping mechanisms to these exposures and sensitivities, which would be a key part of any CBA planning process, however are not included here for the purposes of M&E as these steps are included elsewhere. For a complete version of the tool, please contact Nathalie Beaulieu at nbeaulieu1@gmail.com.

TOOL 11: HAZARD AND RESPONSE FORCE-FIELD ANALYSIS

This tool is used to analyse the effectiveness of existing coping and adaptation strategies against the severity of climate induced hazards. It visually highlights the gaps in current responses and therefore the areas on which to focus adaptation planning. It is used as a baseline to track the development of a community's ability to respond to and adapt to climate change. The learning from monitoring such changes is used for reflection and feedback.

STEP1: Following use of tools that explore trends in climatic hazards and their impacts, such as timelines and seasonal calendars, the community lists the climatic hazards they are experiencing. If they have been ranked in terms of severity of impact or risk, those that score highest are put at the top. Participants then consider the likely risk of the hazard actually happening. The discussion next focuses on identifying the local impacts of the hazard and the risk of each one happening. It is really important to consider risk, or the chance of an event actually happening, as often it is not given due attention.

STEP 2: Participants consider the responses that the community makes to support households that have been affected by the climatic hazard. This includes responses from social networks, institutional support from local informal groups, and help sought from the district headquarters. During the discussion it is important to consider who the responses are an option for and whether they are available to the most poor and vulnerable households. These responses can be entered into the final column in a matrix such as the one below.

Hazard	Risk of hazard happening	Local impact of hazard	Groups most vulnerable to impact	Risk of impact happening	Community responses/ options	Availability of response/ option to most vulnerable group
The river floods	Very high	Rice crop flooded and rots	All	High	Loan for alter-native income generation	Low for poorest
		Terrace inundated with sand	All	High	Loan for seed to replant Seasonal migration to India	Low
		Food scarcity	Pregnant and lactating mothers, Small children	Very High	Share food assistance (Red Cross)	High medium
		Land washed away	Poorest and middle wealth group farming exposed terraces	Low	Local labour employment Loan to enable son to migrate	Medium Low
		House washed away	Poorest group living in thatched huts	Very low	Loan for rebuilding Free timber	Low
Drought	Moderately high					

STEP 3: Based on the above discussion, participants agree on the severity of each hazard. They assess it foremost from the perspective of the most vulnerable households and groups. They score it between 1 (low) and 5 (very severe). These are drawn as bars on a bar graph, above the line.

STEP 4: Participants agree on the ability of the community to respond or the effectiveness of the response and allocate a score between 1 (low) and 5 (very high). These scores are represented as bars below the line, mirroring each of the bars above. The facilitator must ensure everyone understands how the force-field diagram results from the discussion. Once understood it is very clear to all where the shortfalls or imbalances are.

NOTE: The scores for effectiveness of the adaptation strategy should not be higher than for the severity of the hazard–since all hazards have been identified as problems, the strategies evidently do not fully mitigate the problem.

STEP 5: Discussion follows on the match between the severity of the climate hazard and the relative effectiveness of the community's strategies for preparing for and responding to the effects of the hazard impact. Participants consider what actions could take place to balance the response with the severity of the impact. These inform the development of the adaptation plan.

STEP 6: The community repeats the process periodically (often annually). The findings are compared with findings from previous years to monitor change. Participants discuss whether the changes happened as anticipated, what other contributory factors there were, how the climate context has changed, and how learning will inform planning.

TOOL 12: 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. It helps raise awareness of climate change and anchor it in local reality. Visual tools like time-lines and calendars also help highlight climate vulnerability, and capacity to cope and adapt. They provide baseline information and can be carried out periodically to monitor change. Findings inform reflective discussion and learning feeds into community adaptation planning.

HAZARD TIMELINES

Timelines are effective for helping communities and local decision-makers analyse past weather or climate events and identify trends in their nature and impact. They are effective for raising awareness of climate change. A timeline helps introduce the concept of climate variability and the unpredictability of climate change effects, and clarify which events or hazards can be linked to climate change and which are not related. People find it helpful to link new understanding of the mechanisms of climate change with effects experienced locally. A timeline is useful for exploring how the community tends to react to, and cope with, climate hazards and what support has been available. The timeline provides a baseline of climatic events and local responses.

Generally the community develops a timeline of the last 30 to 50 years either on the ground or a large sheet of paper. First they consider the earliest hazard event. Someone with a memory of it stands on the line and describes what happened. Others join in and add detail as appropriate. More recent events are added along the line, up to the present. The facilitator brings climate change into the discussion and helps identify any trends over the time -frame. Discussion follows around the impact of each event, the community response and coping strategies, and the institutional support that was available at the time.

This can all be recorded on a large sheet of paper with the timeline 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.) This information informs the adaptation targets set by the community and therefore the monitoring targets. Periodically, recent climate impacts are added to the timeline along with notes about community responses and institutional support. This leads to discussion about expected and unexpected changes and the effectiveness of strategies. Carefully facilitated reflection leads to strategic learning that feeds back into planning.

EXAMPLE: SUMMARY FROM A CLIMATE HAZARD TIMELINE

Year	Hazards	Impacts	Local coping strategies	External support
2011 (1955)	Landslides	Agricultural land became unproductive	Created small plots for agricultural purposes	–
2017 (1961)	Landslides	Livestock loss and damage to property	Communal pooling	-
2031 (1975)	Floods	Agricultural land swept away, losses of the agricultural commodities and livestock	Clearing the debris to create land suitable for agriculture, protecting unstable land with walls, plantation of grass species	–
2036 (1980)	Landslides	Fragmentation and sweeping away of some agricultural land	Clearing debris to create land suitable for agriculture, retaining unstable land with wall, plantation of grass species	–
2050 (1994)	Heavy rainfall, Landslides	Agricultural land swept away	Diversion canal, Plantation of Simali, bamboo, nigalo, ipil-ipil, tanki, napier	DDC monetary & food support
2059 (2003)	Hailstones	Damage to fruit and fodder, livestock loss	Attempted to protect oranges using net but not successful	–
2064 (2008)	Hailstones	Damage to the shoots of Sal trees, vegetables, fruit, maize; life loss of birds	Cultivating maize for the second time, mixed cropping and diversification, crop insurance	DADO provided vegetable seeds
2066 (2010)	Drought, Strong wind, Hailstones	Dried water sources, Agricultural productivity reduced to 25%.	Fetching water from greater distances, loans from local creditor to buy food, drought resistant crops, pump water, labour work, migration for work	–

Source: Risk Management Society (RIMS)

SEASONAL CALENDARS

Seasonal calendars can be used in a variety of ways with a range of types of information. They can be used not just to compare seasonal variation over a year, but also compare the same season in the past with the present.

- They can be used to highlight climate vulnerability. For example, the calendar can have a row for months when there is insufficient water, or months when people do not sleep at night for fear of floods or landslides. Whilst recording which agricultural activities happen in each month, discussion arises about changes in rainfall that have affected planting and harvesting dates, and therefore yields. Months when there are greatest incidences of crop or animal pests and diseases can highlight changes over recent years linked with raising temperatures.

- They can be used to identify coping strategies and adaptation mechanisms. The calendar can highlight the failure of the winter rains, for example, and lead to discussion about what people do when the seed is all used up. Monthly variations in agricultural labour require ments over the year reveal the months of seasonal migration to India, and discussion arises around why there is a need to migrate and whether migration increases or decreases adaptive capacity in the long and short terms.

- They help gain a comprehensive understanding of vulnerability at household level. For example, people may not respond to a direct question about financial assets, but on the seasonal calendar, following discussion of months of insufficient food, they will identify which months they tend to need to take loans, and this can be linked with discussion of climate change if appropriate.

- They can draw attention to the value of income diversification for increasing adaptation, through recording, for example, which months people sell vegetables or forest products, or do wage labour.

- They facilitate monitoring and evaluation. They provide a baseline for indicators of adaptive capacity such as food sufficiency, income diversification, access to natural and other resources. They provide relevant information for setting adaptation and monitoring targets. When carried out annually they provide monitoring information that also informs reflective discussion

SOCIAL AND GENDER DISAGGREGATION OF HAZARD TIMELINES AND SEASONAL CALENDAR: As with participatory sketch mapping further above, using agreed-upon symbols assigned to different social groups in a given community can be used to add a refined social lens to hazard trend lines and seasonal calendars–for example by adding these symbols to the 'impacts' and 'external support' columns in the hazard timeline, or to certain activities or crops in a seasonal calendar.

ACTIVITY PROFILES 1: AN ADDITIONAL TOOL FOR MEASURING CHANGES IN TIME USE AND WORK LOAD*

'A gender-disaggregated activity calendar is a visualisation of the gender (and age) division of labour during a day, month, season or year. The objective is to gain insights into the type of activities (productive, reproductive and communal) implemented by various household members during a specific time period. Seasonal activity calendars can be used to assess gender division of labour and the workloads of women and men, girls and boys by seasonality. The aim in using seasonal calendars is to gain insights into who does what and workload divisions amongst men and women to allow for more gender sensitive programming that avoids overburdening women and men. In constructing calendars, women, men and adolescents–either separated into different groups or in mixed groups–can discuss who is responsible for which activity using symbols representing different groups, Participants should start by drawing a chart divided by month, season or local events.' World Food Programme (WFP) 2005, p.22.

Seasonal activity calendar differentiated by age and by sex:

Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Planting of crpos												
Irrigation of crops												
Harvesting of crops												
Other farm labour												
Small livestock												
Large livestock												
Migrating for work												
Domestic work												
Care taking												
Collecting water												
Collecting firewood												
Community work												

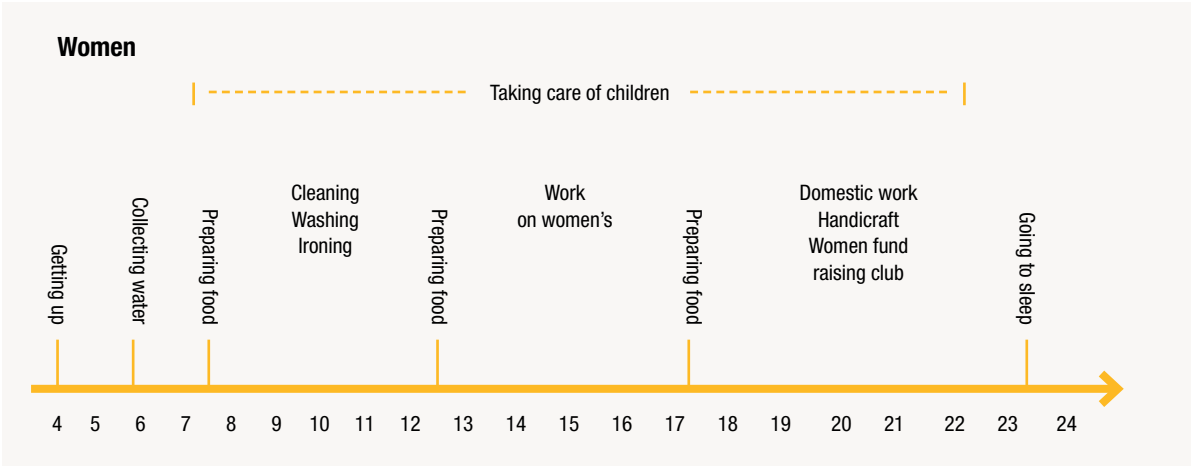
■ Adult men
□ Boys (<14)
■ Elderly men (60+)
● Adult women
○ Girls (<14)
● Elderly women (60+)
¤ Everybody

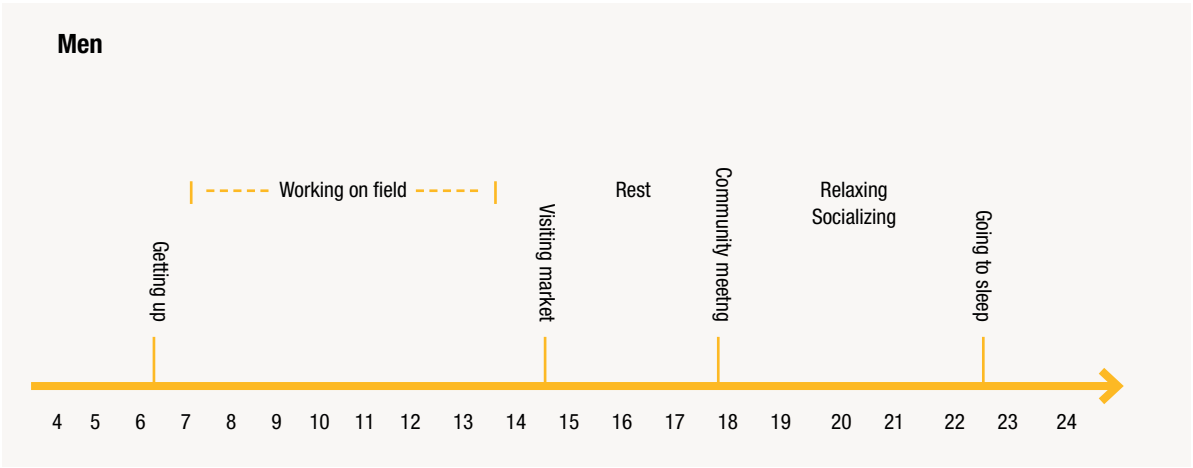
**Source: World Food Programme (WFP) 2005, p.22. Format slightly modified.*

ACTIVITY PROFILES 2: AN ADDITIONAL TOOL FOR MEASURING CHANGES IN TIME USE AND WORK LOAD*

'Daily activity profiles identify daily patterns of activity based on gender (e.g. division of labour on an hourly basis) and provide an easy to interpret overview of the daily workloads of men and women during a typical working day (e.g. how long they work and when they have spare time for social and development activities). For this exercise it is best to divide the group into separate groups for males, females (as well as girls and boys if present). Depending on the context, it may be appropriate to develop activity charts for different seasons (e.g. dry and wet season or agricultural cycles).' (ibid, p.22)

Daily activity calendars differentiated by sex:





**Source: World Food Programme (WFP) 2005, pp.22. Format slightly modified.*

TOOL 13: RAIN CALENDARS: A TOOL FOR UNDERSTANDING CHANGING RAINFALL PATTERNS AND EFFECTS ON LIVELIHOODS[56]

CARE and the International Institute for Sustainable Development (IISD) collaborated to pilot the use of an innovative tool for participatory analysis of changing rainfall patterns. The rain calendar tool is designed to gather community perceptions of rainfall patterns to determine the parameters for good, average, and bad years in terms of rainfall, and to provide a platform for discussing risk management strategies to adapt to changing rainfall patterns.

HOW TO FACILITATE THE TOOL

The tool combines a historical timeline with a seasonal calendar (see Tool 11).

- Participants are asked to plot rainfall and temperature conditions experienced over five or more years.
- They plot the timing–the months or seasons (and where possible, the specific weeks)–during which rain fell in their locality. They also plot the amount of rainfall received under the categories of little/below normal, average/normal, or heavy/above normal rainfall.
- Information on temperature level (normal, high, cold, very cold) and timing is also plotted in the same way for each year.
- Participants also describe the nature, duration, distribution, and effects of rainfall and temperature conditions experienced on their livelihoods.
- 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.

EXAMPLES:

Photo: ©CARE/ALP

TOOL 14: QUARTERLY REFLECTION MEETING GUIDE[57]

The quarterly reflection meetings provide the opportunity for all CBA projects team members and other relevant community, NGO and government stakeholders to contribute to reflection and analysis of progress and achievements; decision making and planning of CBA activities against CBA outputs and purpose/goal.

THE OBJECTIVES OF THE MEETINGS ARE TO:

1. Create a forum for joint reflection for all CBA and PMERL team members and other relevant community, NGO and government stakeholders;
2. Provide an opportunity for stakeholders to critically reflect on previous activities, achievements and monitoring information; make decisions on how to improve future plans, and ensure that the CBA implementation and monitoring activities lead to desired results and impacts;
3. Source feedback and validate CBA information with partners and other stakeholders, including community representatives;
4. Give an opportunity for partners and stakeholders to contribute to and borrow lessons on approaches and methods applied through CBA; and
5. Facilitate CBA teams to produce and share quality quarterly reports which capture monitoring and learning information and provides a key record for required documentation.

INPUTS INTO THE MEETING:

- Participant knowledge and experience;
- Previous CBA plans;
- Previous quarterly reflection reports;
- Process/activity/monitoring reports done in the quarter (community processes, local stakeholder process, learning trip reports etc);
- Community stories, articles and photos collected and taken in the reflection period; and
- Learning meeting reports done in the quarter or the year.

DOCUMENTED OUTPUTS:

- Quarterly reflection report;
- Community stories, cases, articles produced in the quarter; and
- Updated CBA project quarterly plan.

QUARTERLY MEETING AGENDA:

The meeting agenda should be informed by the main purpose of the reflection and expected outputs in that particular reflection meeting. Design the agenda to include the presenters/facilitators and clear time duration/limits for discussions.

1. For each CBA output, use the 5 M&E questions (see Tips below) to:
   a. Share on actual activities, results, participation and unexpected experiences in the last quarter;
   b. Identify, and reflect on achievements, challenges and opportunities arising;
   c. Identify and reflect on questions, reasons, messages and lessons learned for each output
2. Share key methods used for CBA process, gender, advocacy, monitoring and learning and discuss reasons for successes and what did not work;
3. Share content and messages of documentation produced in the quarter;
4. Reflect on the information shared in the three previous bullet points, how it contributes to CBA purpose/goal, and identify overall learning and issues to be addressed based on this reflection–in short and long term;
5. Identify results and impacts which provide convincing evidence of successful CBA for documentation and influencing adaptation policy makers and practitioners;
6. Based on the discussions, develop/revise plan for activities and monitoring for coming quarter for each output and agree on responsibilities;

7. Conclusion: Facilitate a session for participants to give feedback on reflection approach and general feedback on how the meeting was facilitated for future improvements. Take some time to appreciate all the contributions and participation; and in closing suggest a tentative date for next reflection meeting.

PARTICIPANTS WITH RESPONSIBILITY TO ATTEND ARE:

- CBA project staff
- Local government
- Other relevant service providers identified as relevant during stakeholder mapping: service providers, CSOs, researchers, national government, donors etc
- Community representatives

It may be necessary to have a larger meeting including external participants for the reflection on one day and continue on a second day with only a core group of CBA planning team plus community monitors for planning and reflection on the reflection.

TIPS:

- Have a main facilitator for each meeting who is responsible for keeping the meeting focused, participatory and moving. The facilitator should be able to intervene if the discussions fragment into multiple conversations and tactfully preventing anyone from dominating the meeting or being overlooked; and at the same time bringing the meeting to a logical conclusion.
- Make use of the 5 M&E questions to stimulate reflection and discussion:
  1. What are communities, local and national governments doing differently and why?
  2. What happened which was unexpected and what was the impact?
  3. What difference are the changes from Q1 and Q2 making, for whom and why?
  4. What impact do these changes (Q3) have on the equality, rights and relations within and between gender, community groups, livelihood groups, local governments and other relevant actors and why?
  5. What can we learn from these to inform future actions/CBA?

IF POSSIBLE, FACILITATORS ARE ENCOURAGED TO UTILISE TEA BREAKS OR LUNCH TIME/BREAKS FOR REFLECTION SESSIONS:

- Reflect on how the meeting is progressing;
- Reflect on the changes/adjustments needed and
- Agree on how to improve the future sessions.

[47] 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
[48] See ISET (above)
[49] Levine, S., Ludi, E. and Jones, L. 2011. Rethinking Support for Adaptive Capacity to Climate Change. The Role of Development Interventions. Findings from Mozambique, Uganda and Ethiopia. London: ODI. www.careclimatechange.org/files/reports/ACCRA-Rethinking-Support-Report.pdf.
[50] For version 2.0 of this manual, CARE and IIED will work with ODI and the ACCRA team to update this tool to consider decision-making and forecasting in the face of multiple pressures/uncertainty
[51] This tool is inspired by journals used in Outcome Mapping. See IDRC website www.idrc.ca/en/ev-26586-201-1-DO_TOPIC.html
[52] WFP (2005). Thematic Guideline on Integrating Gender into Vulnerability Analysis and Mapping. Rome: World Food Programme, p.21 Available at: http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp197271.pdf
[53] This tool is taken from the CARE Gender Toolkit: http://pqdl.care.org/gendertoolkit
[54] Developed by Rick Davies and others – see Davies, R. and Dart, J. 2005, The Most Significant Change (MSC) Technique: A guide to its use can be found here. www.clearhorizon.com.au/msc-process/
[55] This tool was developed by DfID/IDRC CCAA programme . It must be noted that these questions have not yet been tested in the scope of projects but that they are proposed here for initiatives wishing to deepen their description the drivers of vulnerability and the opportunities to reduce them. They can be tested and improved with practice. Please contact Nathalie Beaulieu at nbeaulieu1@gmail.com.
[56] Adapted from Awuor, C., and Hammil, A. 2009. PLA Notes 60. http://pubs.iied.org/pdfs/14573IIED.pdf. Photos from Cynthia Awuor.
[57] Adapted from CARE ALP, 2011. Quarterly Reflection meeting Guide. Adaptation Learning Programme, November 2011. Please contact Peterson Mucheke or Ruth Mitei at alp@careclimatechange.org.

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PMERL Manual is funded by:

UKaid from the Department for International Development (DFID)

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