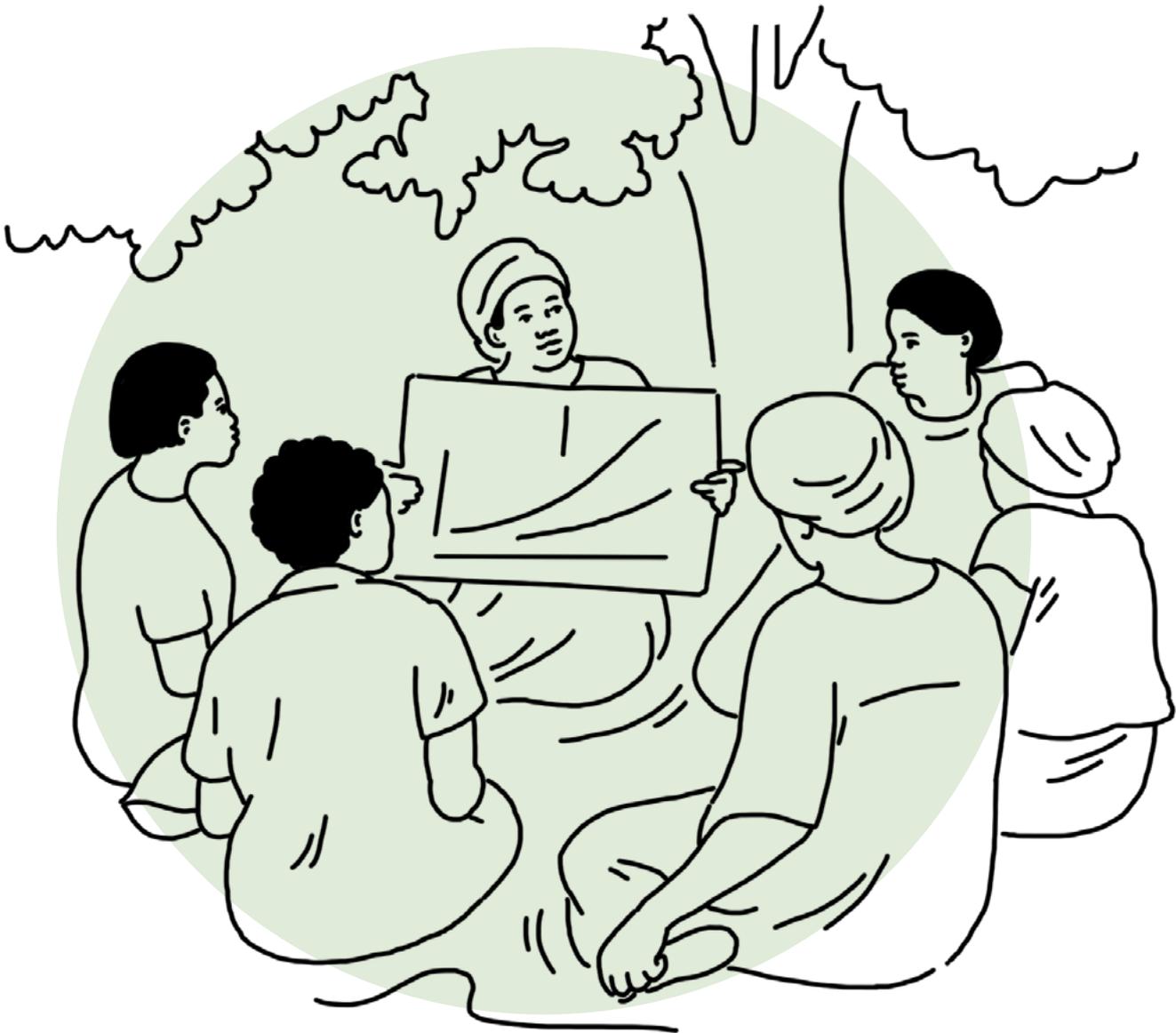


Participatory Assessment of Climate and Disaster Risks (PACDR)

**A Tool for Integrating Climate and Disaster Risks
into Community Planning and Development**

Version 10



**HEKS
EPER**
Bread for all.

Brot
für die Welt

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The tool can be downloaded at www.pacdr.net



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Introduction and workshop preparation

The Participatory Assessment of Climate and Disaster Risks (PACDR) tool can help communities to identify local climate and disaster risks as well as strengthen their capacity to respond to these challenges. This manual provides facilitators with a simple, hands-on guide to conducting community assessments and developing action plans, the results of which can inform project, program, and community planning. Additional information on the science of climate change, facilitation support material, available online resources, as well as case studies of PACDR successes are provided in a set of annexes at the back of the manual.

Symbol Guide

	This symbol indicates that additional information is available.		Symbol for facilitation suggestions
	This symbol indicates important suggestions or hints.		Symbol for group or plenary discussion.
	This symbol indicates hints on time management.		This symbol indicates that the module includes group work.
	Blue colors indicate modules that are carried out only by the team of facilitators.		Green colors indicate modules that are carried out with the community.



Good reasons to consider climate and other hazards

The climate crisis is one of the greatest challenges humankind has ever faced. Rising temperatures and changing weather patterns can make natural or human-made hazards far worse and can also generate new ones, for example the disasters resulting from the increased frequency and intensity of severe storms and droughts. The capacity of individuals and communities to respond and adapt to these new conditions depends on the strength of the natural, financial, social, and governance systems they rely on for their livelihoods. Climate change and disasters will endanger the long-term success of development efforts if communities and governments do not act upon these challenges.

Objectives

The PACDR tool adopts an integrated approach to reducing climate and disaster risks, the causal factors of which are often tightly interlinked. Climate change adaptation is therefore considered an integral part of overall disaster risk reduction, and the term 'Risk Reduction' is thus used throughout this manual as an inclusive concept. The PACDR tool and this manual are designed to be self-explanatory to the degree that first-time users with experience in community-based participatory approaches, as well as basic knowledge of climate change and disaster risk reduction, can work their way through the modules without assistance. It is applicable in both, rural and urban settings. Non-governmental or community-based organizations and district or local governments, can initiate and facilitate the process. Community-level project developers, managers and field staff may also find the tool useful in assessing existing or planned development projects.



Combining PACDR with other tools may sharpen the analysis by focusing on a specific theme or planning step. The usefulness of these add-on tools varies according to the local circumstances or the specific focus of the organization using the tool. Some modules include suggestions for add-ons, examples of which can be found in Annex V.

In detail, the tool enables users to:

- Understand how climate and other hazards affect lives and livelihood resources
- Learn how individuals and communities currently respond to these hazard
- Identify and plan adaptation and risk reduction options to enhance people's resilience
- Include considerations of gender and marginalised groups throughout the assessment of climate and disaster risks



Overview of the tool

Assessment phase



Workshop preparation

Information on how to organise a community PACDR workshop

Module 1: Context assessment

Collection of contextual background information and compilation of the community profile.

- Collection of information to develop a profile of the community and their context
- Search for information on climate change projections, impacts and other hazards, as well as on national and regional climate change and disaster risk reduction policies
- Identification of current or planned local development initiatives

Module 2: Climate change and hazard analysis

Climate change and identification of hazards in the community

- Workshop kick-off: Understanding climate change and identifying hazards in the community
- Participatory mapping of resources and hazards in the community
- Creation of a seasonal calendar identifying events and periods of hazard-related stress



Module 3: Hazard impact assessment

Analysis of impacts of hazards on livelihood resources and identification of the most harmful hazards

- Creation of a hazard impact matrix
- Understanding of climate change trends



Adaptation Planning phase



Module 4: Adaptation and risk reduction options

Survey and assessment of community responses to cope with climate and disaster impacts

- Collection and evaluation of existing community responses
- Identification and assessment of additional risk reduction options
- Consideration of challenges, needs, and opportunities



Module 5: Analysis and synthesis of results

Summary of main findings

- Creation of a synthesis report with the main findings and conclusions

Module 6: Community action planning

Development of an action plan and presentation to the community

- Presentation and discussion of the synthesis
- Prioritisation of practices and measures
- Action planning and outlook
- Presentation to the wider community
- Post-workshop activities



How to organize a community workshop?

A careful preparation of PACDR is as important as the assessment itself.

Module 1 has limited community involvement. All the subsequent modules require maximum community participation to ensure community ownership.

The facilitation team must make sure that the community process is well prepared, that the community members have confidence and trust in the process as well as the team, that expectations are openly discussed, and that objectives are clear and realistic.

Check list for organizing a PACDR workshop:

- Select the **community**: Important considerations include the willingness of the leaders to participate, contribute and carry out disaster risk reduction (DRR) and adaptation plans, the availability and willingness of participants, awareness of the existence of internal conflicts that might impede the process, and openness to sharing the PACDR experience with other communities.
 - Decide on **geographical scope** of the assessment in collaboration with community leaders and / or representatives, and potentially government representatives and other experts if appropriate and available. The scope can range from e.g., focusing on the entire village or a specific part of the village. Village surroundings, watershed level or specific landscape conditions can be considered in defining the boundary of the assessment. The scope of the assessment can also be determined by the mandate of the involved participants of the assessment, and vice versa.
 - Organize **preparation meetings** with the community leaders and / or representatives.
 - Prepare a **budget** for preparation and implementation of the PACDR process and for carrying out the first adaptation measures. Additional sources of funds for community adaptation measures must be identified.
 - Set up a skilled and diverse **facilitation team**.
 - Look for **appropriate venues** for the plenary meetings and the working groups with the possibility of displaying the posters (walls, boards).
 - Selection of participants must be transparent. During a community meeting, **15–20 women and 15–20 men** are selected from different social and age groups.
 - Consider the participation of **local government** representatives and other actors linked to the community. They can foster ownership and help provide resources. Be aware of the potential bias they bring into to assessment and ensure to facilitate inclusive participation of all.
 - Discuss and determine workshop **rules**, norms, and attitudes with the participants.
 - Participants might be illiterate and/or speak a language the facilitators do not understand. Make sure to work with symbols and **competent interpreters** to generate accurate results. *Present a list of keywords in the local language(s) to assure that participants understand the terminology.*
 - Be aware of **potential conflicts** in the community and consider **do-no-harm** methods.
 - Plan **enough time** for the participants to express their opinions clearly and completely but remember that their time is valuable – try to find a good balance.
 - The different modules and exercises should be carried out in **successive meetings over several days or spread across several weeks**, according to the availability and suggestions of the participants.
 - In the description of each exercise, the required **material** is indicated. Most exercises begin in separate groups (women, men, minorities if applicable).
- ⇒ *Please refer to Annex II for further practical advice.*

Facilitation team and skills

The PACDR facilitation team should include:

- 2 facilitators (different gender)
- 2 or more note takers (1 per group)
- If necessary 2 translators/interpreters (1 per group)
- 1 person responsible for logistical arrangements

Note taking is an important part of documenting results and, along with the completed templates from the exercises, forms the basis for sharing the results of the assessment with the broader community, other organizations, and government agencies for use in planning, advocacy, and implementation of activities.

Remember that PACDR is not about data collection but about **community empowerment and action**. PACDR workshops are participatory, results-oriented, with open/unforeseen outcomes where all are both learners and contributors to the outcomes. **Facilitators are responsible for the smooth running of the workshop process**. They should be open-minded, curious, attentive, approachable, and impartial.

.....

Here are some useful facilitation hints:

- Speak loudly, audibly, in simple sentences.
- Ask questions and avoid teaching.
- Arouse curiosity, get communication going.
- Draw and discuss conclusions.
- Stop side discussions during plenary sessions, manage dominators, encourage silent people.
- Be familiar with local beliefs, values, behaviours, practices, taboos, customs, and traditions.
- Pay attention to body language and non-verbal signals.
- Distinguish between perception, assumption, and evaluation.
- Question disturbances and provocations by participants.
- Avoid moral appeals.
- Know your own strengths and weaknesses.

• Please refer to Annex III for blank note taking templates and further guidance

.....

Community participation

Community participation is an essential element of the tool, and the facilitators face the challenge of balancing wide representation against the practical issues related to enabling people to participate meaningfully. Broad local participation helps ensure that interventions are tailored to the local context and that the risk reduction strategies and specific adaptation options suit the local people. A hallmark of the PACDR tool is that it builds on local capacities and community responses to recurring disasters to develop risk reduction action plans appropriate to the specific local circumstances. To do so, it is key to create a space where all participants are comfortable to share their knowledge, opinions, doubts, fears, and experiences in a trustful and respectful manner. Make sure that participants understand the questions they are asked and always provide a short summary of the results at the end of each exercise.

Another key element is the **integration of gender and minority considerations** into the assessment and planning process. The considerations start with the recognition that different social groups (e.g., men, women, and minorities) are affected differently by climate change and disasters and may apply different coping mechanisms. Hence their different perspectives must be considered. The idea is to ensure that risk reduction and specific adaptation efforts systematically and effectively address gender- and minority-specific impacts of climate and disaster risks and do not reinforce existing inequalities. For example, fetching water in many cultures is usually done by women. Increasing temperatures and prolonged dry spells often lead to women having to cover longer distances to find water. They thus spend more time fulfilling this one household chore, while the other chores remain on their shoulders. Ultimately, climate change and disasters thus increase women’s workload.

Throughout this manual, the term “minority” refers to categories of persons who hold few positions of social power, and may include groups identified by ethnicity, religion, political affiliation, nationality, wealth, age, physical or mental conditions, or sexual orientation. During PACDR workshops it is advisable to **separate groups according to sex and minorities whenever the circumstances call for it**. Separate working sessions, followed by joint discussions reveal **different realities** between gender and minorities and consequently **different risk perceptions and risk reduction needs**. Ensure that the contributions of women, men, and minorities are equally considered.

• Please refer to Annex II for further practical advice.

Climate Change and Disaster Risk

Climate change mitigation and adaptation

It is important to differentiate between weather and climate. Weather is a set of meteorological conditions in a specific moment and location (e.g., a storm, rain...). Climatic conditions vary naturally on longer time-scales – season to season, year to year, decade to decade. The short to medium-term fluctuations are therefore weather events. Climate change refers to changes in average climatic conditions over a long period of time (e.g., changes in temperatures or rainfall patterns or an increase in storms over decades). The scientific community has reached consensus that there has been an unequivocal warming of the climate system since 1850-1900. Further, it is scientifically proven that most of the observed warming over this period has been caused by emissions of greenhouse gases (GHG) from human activities (IPCC Assessment Report 6, Working Group (1)). To limit global warming and protect current climatic conditions, greenhouse gas emissions must be reduced drastically e.g., by reducing fossil fuel consumption. Climate change adaptation aims to reduce negative effects of climate change on the environment and society, e.g., by introducing more drought resistant varieties in agriculture. In addition, it aims to benefit from newly arising opportunities that climate change may pose, such as growing crops that have previously not thrived under the local climatic conditions, but now, due to climate change, do.

→ For more information, please refer to Annex I (Glossary) & Annex VI.

Disaster risk reduction (DRR)

A disaster is a situation where an extreme event such as a rainstorm (hazard) negatively affects individuals or a community to a degree that their livelihoods and lives are threatened or their ability to recover is exceeded. DRR measures are implemented at all levels to prevent disaster losses by reducing exposure to different hazards and by reducing the vulnerability of populations and assets. There is considerable overlap between disaster risk reduction and climate change adaptation. DRR also covers risk reduction of climate related disasters such as floods, droughts, hurricanes, and storm surges. However, it also addresses non-climate-related disasters such as earthquakes and therefore goes beyond climate change adaptation. As an umbrella term “risk reduction” is used for DRR and climate change adaptation in this manual. Practical application of risk reduction methods, such as the risk assessment contained in this manual, are also important tools for climate change adaptation.

→ For more information, please refer to the Glossary in the Annex I.

Background information on climate change and disaster risk

Start by making yourself familiar with the overall situation on climate change and disaster risk in the target area, e.g., what are negative impacts of climate change, both current and expected in the future. Review online sources of climate change projections for your region, and collect additional information on national and local climate policies, plans, and strategies. Annex I includes information on government policy, as well as on climate hazards and their impacts; and Annex VI includes additional materials that may be useful here. To develop the background material on climate change and disaster risk as well as on policies, plans and strategies, the facilitating team can divide up the tasks among the members and any additional individuals to conduct the necessary research.

→ All findings are summarized in a community profile (see Exercise 1 below).

Exercise 1

Community profile

The purpose of describing the community context is to provide an overview of the available resources, development plans, and conditions of the community.

Description of the community context

The purpose of describing the community context is to provide a common understanding of the available resources, to identify trends that may be influencing the community, and to get information about existing and planned policies and projects that may help communities to adapt to climate change and to reduce disaster risks.



The time required to complete Module 1 will depend on the extent of information gathering and on how the facilitating team conducts the process. As a general rule, plan 2–4 days to collect the information and 1 day to compile the findings into the community profile.

The description includes:

- Main livelihoods and natural and physical assets and resources
- Local government, local and external groups, institutions, donors and organizations (including informal and community-based groups) that are working with the local population
- Projects and organizations targeting disaster risk reduction and/or climate change adaptation in the community
- Prevention and preparedness systems in place to protect against climate, natural, or human-made hazards
- The level of government activity and influence in the area
- Political, cultural, and social and economic trends (including gender issues)



A meeting or short retreat of the facilitating team and others in the community to discuss the results of this module may help bring everyone to a common understanding of how climate change and disaster risk reduction can inform community development.

Methods

For the collection of the community data, the facilitation team interviews community leaders, authorities, staff from community-based organizations, resource persons such as extension agents, scientists and other professionals, and private sector representatives such as businesspeople, farmers, and others.

The facilitation team is likely to have its own ideas about people to involve at this stage, and the same people involved in this preliminary step are likely to become contributors in taking respective risk reduction action.

A community walk (also known as transect walk) with local people may be useful to see and discover the community's realities. Additionally, documents and reports about the community may be consulted, such as a community development plan.

After all the information is collected, the team members compile the findings in the community profile that can also inform stakeholders, donors and others involved in the assessment if needed. Other relevant features not mentioned in the example may be added to the list.

Example: Community Profile

- **Name of the community:** _____
- **District & Region:** _____
- **Community size (km²):** _____
- **No. of inhabitants** _____ **Men:** _____ **Women:** _____ **Children:** _____
- **No. of households:** _____
- **Administration (local government):** _____
- **Local leaders:** _____
- **Organizations in the community:** _____
- **Geographical features:** _____
- **Primary natural and physical assets and resources:** _____
- **Primary economic activities :** _____
- **Annual climate:** _____
- **Current and projected changes of climatic conditions:** _____
- **Frequent hazards:** _____
- **Primary challenges:** _____
- **Political, cultural, social, and economic trends (including gender issues):**

- **Village development plan:** _____
- **External projects, NGOs, interventions, assistance:** _____
- **Projects and programs targeting disaster risk reduction and/or climate change adaptation in the community:** _____
- **Prevention and preparedness systems in place to protect against climate, natural or human-made hazards:** _____
- **Other useful information:** _____

Workshop kick-off and basic information about climate change

After having thoroughly prepared the PACDR process as described in the Introduction chapter and Module 1, the facilitation team is now ready to start the PACDR workshop in the community with the selected male and female participants.

To create a positive and productive working atmosphere the team applies the following steps:

- Introduction and opening by the community chairpersons
- Introduction by the team leader(s) with information about the purpose of the workshop
- Presentation of facilitation team (including the translators), community participants, workshop objectives, expected results and limitations
- Brief overview of the PACDR tool (modules and exercises)
- Example of a community success story with PACDR (see Annex VII for an example from DR Congo)

Workshop program

The workshop schedule is organized jointly with the participants by defining the workshop program (number of days and frequency and content of the sessions) and the rules and responsibilities.

To assure relevant participation of the community participants they should first acquire basic knowledge about climate change.

Key terms in local language

The facilitation team has already produced meaningful translations of key terms of the PACDR tool into the local language(s). A facilitator or translator presents and explains the terms.

Input on climate change

Provide a brief and easy to understand description of climate change (characteristics, causes, responses, and future trends). It is helpful to produce a poster to illustrate global warming and the effects. For the preparation of this input, Annex VI A and B offer helpful material.

Climate impact chain

The impact chains developed by the facilitators in Module 1 now serve as background information. To ensure participants understand causes and effects of climate change impacts and natural disasters on their livelihoods, the facilitators jointly develop impact chains with the community participants.

For this purpose, the following puzzle (page 18) can be used.



Be aware of (hidden) expectations of the participants and inform them about possible results and limitations

Understanding impact chains: Puzzle with the community



Facilitation

Facilitators explain that the aim is to examine where the impacts of climate change and natural disasters begin and what they cause.

They show prepared pieces of a puzzle that represent hazards or disasters, as well as direct and secondary impacts (see examples below).

They then discuss how to put these pieces in the right order.

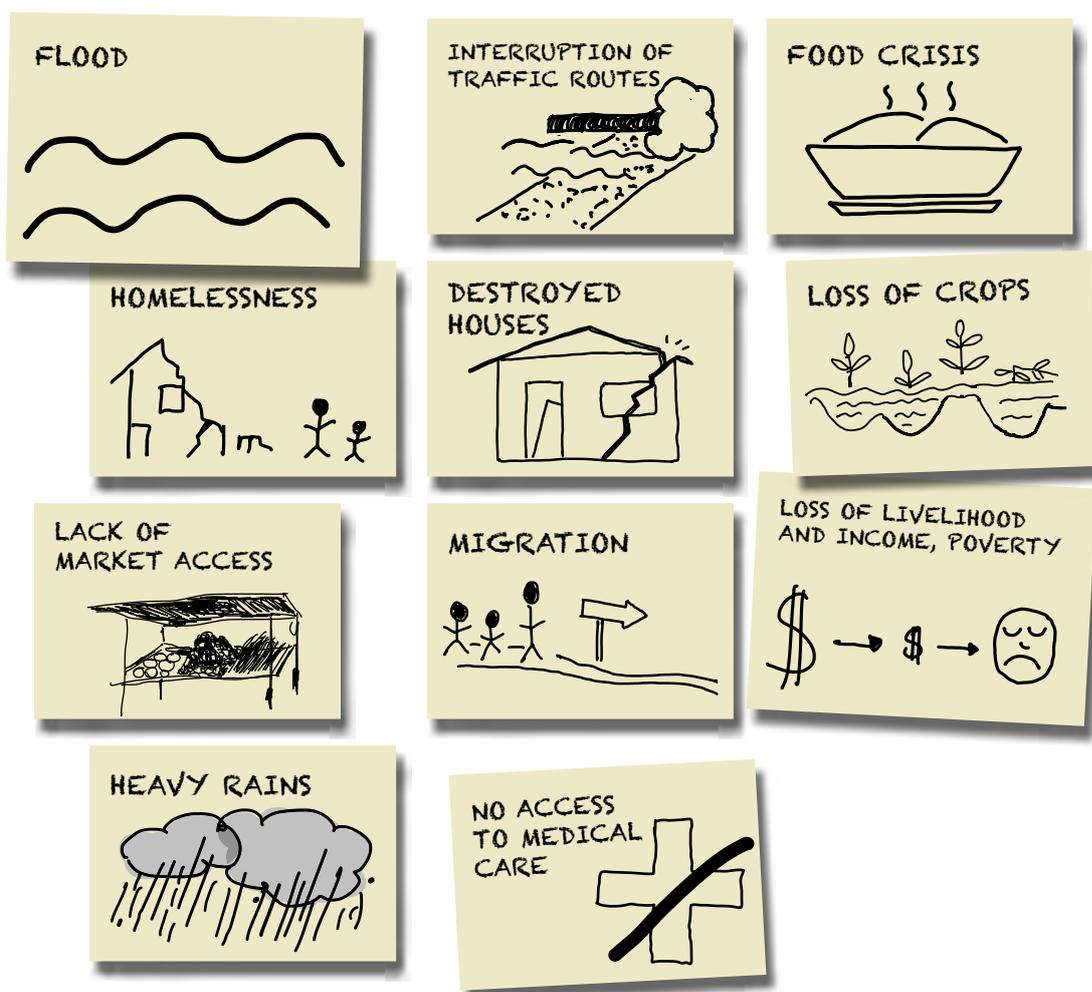
Facilitators can use the following guiding questions:

- What are our main challenges?
- What is their origin?
- If we notice X, where does this stem from?
- If X happens, what are the consequences?

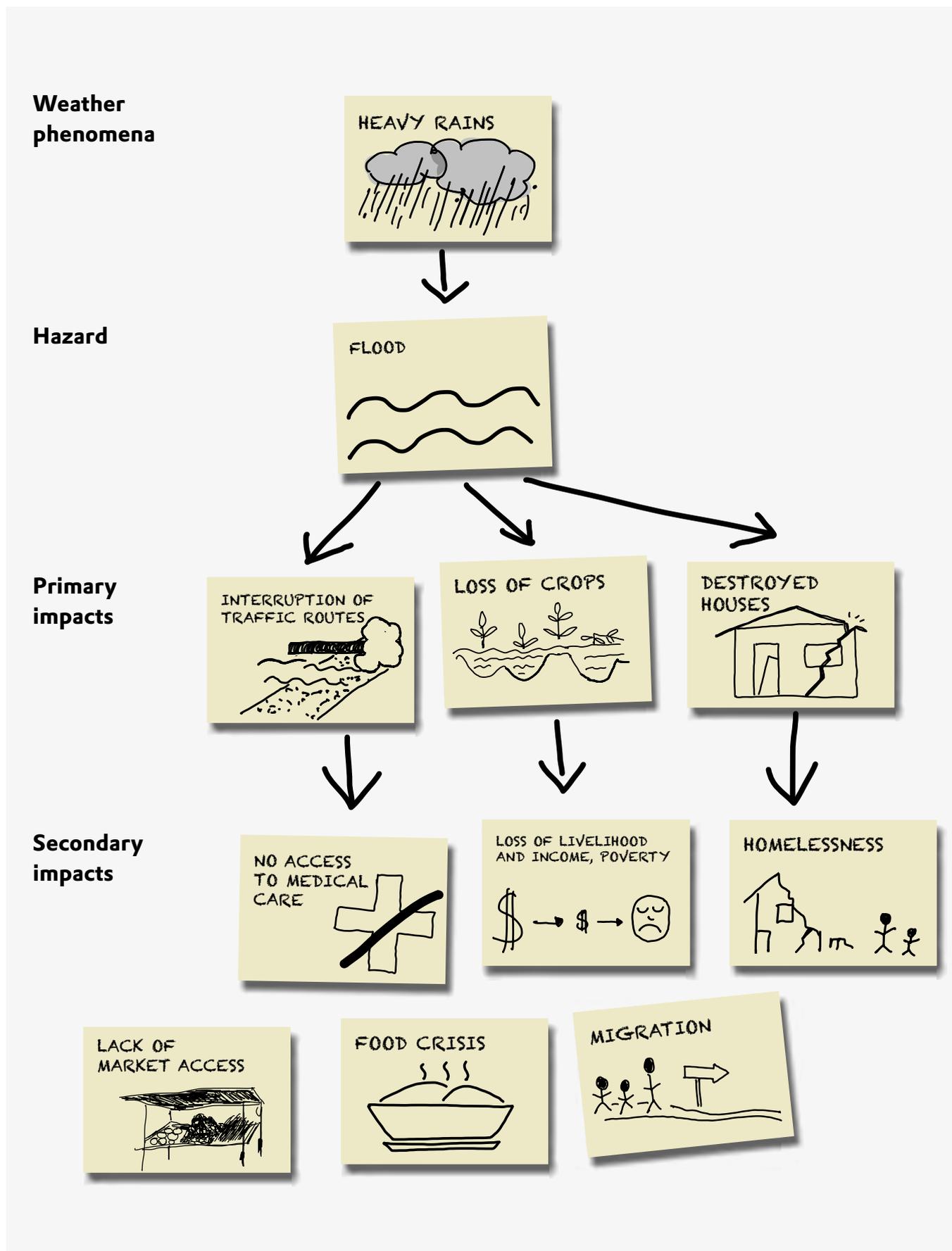
The ordered puzzle is then taped to the wall for all to see.

This impact chain should remain visible throughout the assessment.

It allows participants to refer to it and use it for guidance.



Result of a "solved" puzzle: Impact chain for hazard "flood":



Exercise 2

Hazards in the community

In exercise 2 the participants identify the climate related hazards most relevant for the community.

The **objectives** of this exercise are to:

- **Create a common understanding of the primary hazards affecting the community**
- **Prioritize the hazards in the community**



The focus of this exercise is on climate related hazards, however, other hazards may be considered if very crucial in the community (e.g. land conflicts)



Remember to document the main discussion points and the results. Annex III has templates that may be helpful



Plan 20 minutes for team preparation, 20 minutes for hazard collection and 20 minutes for prioritization

Facilitation

This exercise is carried out in plenary.

Facilitators make sure that the participants understand the meaning of „hazard“ and that a list of primary hazards in the community will be developed.

In an open plenary discussion, the participants propose all the predominately climate related hazards observed in the community. The facilitator writes the hazards on a large sheet of paper displayed on the wall. Often 10 to 20 hazards are mentioned. If participants forget important hazards identified in Module 1, facilitators can guide them by questions such as:

- **Are heavy rains common here, and if so, what is the impact?**
- **Have you noticed drying up of vegetation? What causes this?**
- **Have you noticed trees and shrubs shedding leaves or extensive foliage on the ground? Why do you think this is happening?**

After having completed the list, the participants should discuss the following questions:

- **Who is most affected by a particular hazard (women, men, other social groups)?**
- **Why is this the case (e.g., because migrants are living the flood plains)?**
- **Which specific elements are most affected by which hazard (e.g. mudbrick houses along the river)?**
- **Why (e.g., because of their location in the floodplain or the type of construction)?**
- **Are there any changes in the appearance and frequency of hazards?**
- **Other relevant questions helpful to create a common understanding of the nature and magnitude of hazards affecting the community.**

The next step is the **prioritisation** of the hazards.

Form small groups of 2 people each („buzz groups“) and give them 10 minutes to discuss what the most threatening hazards are. All groups discuss simultaneously (buzz). Instruct them that each group should identify the three hazards that are most serious to them.

In plenary, each group names their hazards and the facilitator puts dashes behind each hazard. At the end, all the dashes are counted, and the results are written down. The highest numbers indicate the most severe hazards in the community. Ask if there are any comments or questions concerning the prioritisation.

Wrap up the exercise by summarizing the results and main discussion points.

Participants draw a map of their community, indicating the areas and livelihood resources put at risk by certain climate, natural or human-made hazards, and discuss the changes in the type, extent, frequency, and intensity of these hazards.

The **objectives** of this exercise are to:

- Identify important livelihood resources and assets in the community
- Identify areas and resources at risk from climate, natural or human-made hazards
- Analyse changes in areas affected and types of hazards seen

This exercise asks participants to share their knowledge so that local knowledge can complement the general knowledge developed in the review of the scientific and policy literature in Module 1. The map also provides an input to Exercise 4, which further analyses vulnerabilities of livelihood assets of the community.

Facilitation

This exercise is carried out in separate gender groups (and minority groups if applicable). Facilitators provide pencils or markers in multiple colours and sheets of paper at least 80 cm x 100 cm in size. The exercise begins with the participants drawing the boundaries of the community.

The facilitators explain to the participants that they will be drawing a map of their community in two steps– the first focuses on boundaries, settled areas, facilities, and resources, and the second on hazards.

Step 1

The facilitators ask the participants to start by drawing the locations of:

- Infrastructures: roads and facilities such as places of worship, health clinics, schools, and wells
- Natural resources such as forested areas, water bodies, agricultural land, fishery zones, pastures, and spiritual places
- Villages and towns, if the map is drawn at district or regional level

Facilitators ask the participants to:

- Use symbols to represent facilities, resources and other map entries
- Indicate different types of land use (e.g., irrigated, and non-irrigated for agricultural land)
- Create a legend for the symbols used on the map



Where conflict is a major hazard that could be an obstacle to the development of successful climate adaptation strategies, undertaking an additional conflict analysis would be a good idea. See Annex V for further guidance.



Facilitation

STEP 2

The participants discuss the hazards in the community and place them on the map by using red symbols (see example).

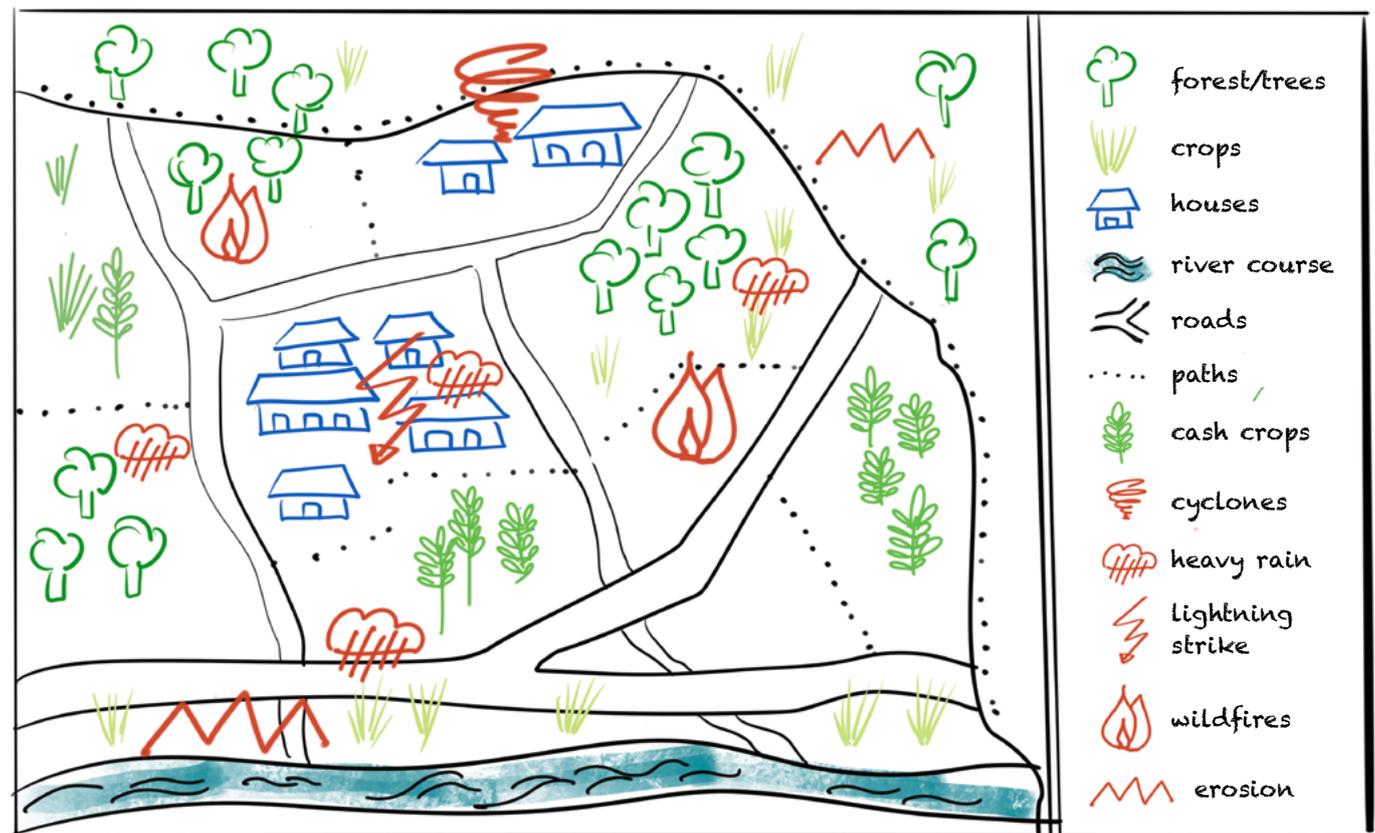
Among the hazards to consider are:

- Extreme weather events such as typhoons, cyclones, floods, heat waves and droughts
- Shifts in season e.g., onset and end of rainy season(s) if these have implications on specific locations
- Sea-level rise (if applicable for the community)
- Landslides
- Wildfires
- Earthquakes, volcano eruptions
- Environmental degradation including deforestation, land/soil degradation, soil/water pollution, biodiversity loss, pests, invasive species, waste dumping etc
- Other human-made hazards such as socio-political conflicts, market crisis etc.

By helping participants distinguish between hazards and their impacts, facilitators will be setting the stage for the analysis of impacts in the next exercise. Note hazards that affect the whole area as opposed to being specific to a location on the margins of the map.



Do not spend too much time drawing the boundaries, settled areas and facilities. Try to focus on the resources and hazards.



Discussion

When the groups have completed their work, they come together in plenary and present their maps.

The following questions can guide a discussion of the hazards:

- ...⇒ Where do the maps agree, and how do they differ?
- ...⇒ Are the hazards different now than they were 10, 20 or 30 years ago?
- ...⇒ Are the hazards changing in frequency and intensity?
- ...⇒ Who is most affected by them?
- ...⇒ Do the hazards cause or increase conflicts between groups (e.g. irrigation users and non-users, farmers and livestock keepers)?
- ...⇒ Who has access to and control over community livelihood resources?

The facilitation team takes notes on the discussion, and writes up an exercise report that includes the findings of the mapping exercises and the discussion (see Annex III for templates). The analysis of these results, along with the literature review in Module 1, will help establish the hazards associated with climate change, provide insight into how these hazards have evolved over time and establish a basis for considering the potential linkages between and among hazards. They are also likely to reveal important differences in the perceptions across gender and within minority groups.



Plan for 45 minutes of team preparation, 1.5 hours for the mapping exercise, and 1 – 1.5 hours for plenary presentation and discussion.



Remember to write up the results. Annex III has templates that may be helpful.



Men's group preparing hazard map, Nepal

Exercise 4

Seasonal calendar

In this exercise, participants make a seasonal calendar indicating important events in the year – particularly periods of stress due to natural or human-made hazards – and discuss how the frequency, intensity and timing of the hazards have changed.

The **objectives** of this exercise are to:

- Understand the main community activities and events
- Identify periods of stress, hazard, disease, hunger, debt, and vulnerability
- Analyse changes in seasonal activities and events and their links to climate change

This exercise complements the information gathered in the resource and hazard mapping exercise, as well as augmenting the scientific and policy information gathered in the climate change and disaster risk portion of Module 1, with local knowledge.



Facilitation

This exercise is carried out in separate gender groups (and minority groups if applicable). As done in the hazard map exercise, facilitators provide pencils or markers in multiple colours and sheets of paper at least 80 cm x 100 cm in size. Facilitators prepare these sheets in advance as tables with the months of the year across the top, and a column down the side for listing community events or activities. Facilitators explain how to develop a seasonal calendar to show key events and activities that occur during the year. After plenary explanations, the participants are divided into groups, who each work on a separate calendar.



Some groups may wish to start the seasonal calendar not in January but in another month, e.g. the beginning of the rainy season.

Sample seasonal calendar

EVENTS	J	F	M	A	M	J	J	A	S	O	N	D	
Rainy season	Red			Green			Red			Green			
Heat waves	Red					Green		Red					
Paddy cultivation	Red		Green			Red					Green		
Water scarcity	Red							Green		Red			
Labor migration	Red				Green								
School expenses	Red									Green			

Red = now Green = 20-30 years ago

The participants list significant seasons, events or conditions down the left-most column. Among the common items to consider for placement on the list are:

- Rainy and dry seasons
- Crop seasons – clearing, burning, planting, weeding and harvest
- Livestock keeping and fishing seasons
- Typical timing of weather or climate hazards such as typhoons or cyclones, floods, drought and wildfires
- Periods of stress: food scarcity, water shortage, diseases, pests
- Hunting and firewood collection periods
- Times of labour migration
- Periods of potential financial stress – taxes, school fees, holiday expenses
- Important holidays and festivals

As the participants list each event, they mark the timing of the events by drawing lines through the box under the appropriate months, working from left to right for each event before moving on to the next event. After having completed the calendar, the facilitator asks how the seasons, events and activities had been 20 to 30 years ago. The participants draw lines in a different colour under the lines of marking the current seasonality. In this way, the calendar shows shifts in the rainy season, for example, or an increase in food shortage periods. Elderly people are important sources of information for this step.



For more ideas on common seasonal events in communities, consult Annex IV.



Try to balance the time spent preparing the seasonal calendar with the important discussion of the timing of events.



Plan for one hour of team preparation, 1 – 1.5 hours for the group exercise, and 1 – 1.5 hours for plenary presentation and discussion.

Discussion

When the groups have completed their work, they come together in plenary and present their calendars. The following questions can guide the discussion:

- Where do the calendars agree, and where do they differ?
- What are the differences in the timing of seasons and events as compared to 20 or 30 years ago?
- What could be the reasons for these changes?
- Who has access to and control over community livelihood resources?



Remember to write up the results. Annex III has templates that may be helpful.



Women's group preparing seasonal calendar, Sierra Leone



Example of seasonal calendar, Nepal

Module 3

Hazard impact assessment

Analysis of impacts of hazards on livelihood resources and identification of the most harmful hazards



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In **Module 3**, participants identify the resources most important to people's livelihoods. They then develop a matrix to determine which of the community's livelihood resources and which community members are most affected by the primary hazards.

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Exercise 5

Hazard Impact Matrix



Climate change risk describes the extent to which livelihoods, people, or ecosystems can be affected by climate hazards. There are many reasons for this, such as being more exposed and vulnerable to these hazards (e.g., mudbrick houses in flood-plains) and/or having less capacity to cope with or recover from climate impacts. Because climate change is a risk multiplier, successful DRR and climate change adaptation need to consider the root causes of vulnerability.

In this exercise, participants develop a matrix that lists the resources most important to the community's livelihoods and the hazards prioritized in Exercise 2. Participants then evaluate the level of impact of the hazards.

The **objectives** of the exercise are to:

- Identify the community's most important resources
- Determine which resources are most at risk
- Determine which resources are most effected by the hazards
- Identify the vulnerability of different sub-groups/minorities within the community

This exercise builds on the results from the previous exercises: the prioritization of hazards, the resource and hazard map, and the seasonal calendar from Module 2.



A list of resources and assets in Annex IV provides a basis for discussion, but every community is different, and the list is intended only as a prompt.

Facilitation

This exercise is carried out in separate gender groups (and minority groups if applicable). As in the previous exercises, facilitators provide pencils or markers in multiple colours and sheets of paper at least 80 cm x 100 cm in size. Facilitators prepare these sheets in advance in a matrix (see example below). Facilitators ask the group participants to identify the main livelihood resources in each of the categories listed below. The resources identified during Exercise 3 (resource and hazard map) should be used for this discussion.

- Natural resources on which people rely for income, food, medicine, protection, fuel and other sustenance – forests, water, air and soil, for example
- Physical resources are manmade – infrastructure for transport, water management, energy and communications such as roads, hospitals, dwellings, irrigation systems and water tanks
- Economic and financial resources to generate income such as agricultural, livestock, handicrafts, markets, savings, casual work and remittances
- Social resources such as local councils, religious groups, cooperatives, saving groups and family
- Personal resources – the skills, knowledge, capacity and good health important to the pursuit of livelihoods, including agricultural and leadership skills and gender-specific knowledge



In order to be manageable, the total number of identified resources or assets should not exceed 20.

Facilitators list the prioritized hazards from Exercise 2 horizontally across the top of the matrix. Participants then rate the impact of every hazard on the resources using the following scoring system:

- 3 = high impact on the resource
- 2 = medium impact on the resource
- 1 = low impact on the resource
- 0 = no or positive impact on the resource

The participants start with the first hazard and work vertically down the column. For each hazard, the participants decide on the degree of impact that each of the hazards has on each of the resources, and note the score in the appropriate box.



Be aware of opinion leaders, quick responders, manipulation and domination, and to take enough time to discuss the score to find a consensus, especially at the beginning of the exercise.

Sample Hazard impact matrix

	LIVELIHOOD RESOURCES AND ASSETS	Hazard 1	Hazard 2	Hazard 3
NATURAL				
PHYSICAL				
ECONOMIC FINANCIAL				
SOCIAL				
PERSONAL				



We advise that the the matrix does not contain more than 3 to 5 hazards.



When preparing the matrix, do not write "Total" or "Ranking" on the sheet.

Instead, add these headings at the end of the exercise to create a moment of surprise when the totals and rankings are revealed.

Sample Filled-in Hazard impact matrix

	LIVELIHOOD RESOURCES	Drought	Changing rainfall patterns	Heavy winds	Total
NATURAL	Arable land	3	1	2	6
	Pasture	3	1	0	4
	Water	3	1	0	4
	Forest	1	0	2	3
PHYSICAL	Houses	0	0	2	2
	Roads	0	0	1	1
	Wells	0	0	0	0
ECONOMIC FINANCIAL	Farming	3	3	3	9
	Livestock	3	2	2	7
	Petty trade	2	2	2	6
	Paid work	1	0	1	2
SOCIAL	Farmers association	2	1	1	4
	Women's Group	2	1	1	4
	Family	2	1	1	4
PERSONAL	Health	3	2	2	7
	Security	2	1	1	4
	Skills	0	0	0	0
Total		30	16	21	

The note takers document key points of discussion that lead to the assigned scores, and record any disagreements on the scores.

Facilitators add the numbers vertically and horizontally to determine which livelihood resources have the highest horizontal sum and are thus most vulnerable, and which hazard has the highest vertical sum and thus has the highest impact on the identified livelihood resources.

Discussion

When the groups have completed their work, they come together in plenary and present their matrix.

The following questions can guide a discussion on the Hazard Impact Matrix:

- ...➤ Where do the matrices of the different groups (e.g. men and women) agree, and where do they differ?
- ...➤ Why are some hazards more harmful than others?
- ...➤ Where and how have the impacts on the community increased in recent years?
- ...➤ Which assets or resources are most affected, and which are not affected? Why?
- ...➤ Are any groups – the landless, people with disabilities, the elderly, children, youth, migrants, or indigenous people – more affected than others? Why?
- ...➤ What are reasons for the high levels of vulnerability of some groups of people, as well as some assets and resources?
- ...➤ What does it mean to the community when the basic assets or resources of the most common livelihoods are affected?



Plan 45 minutes for team preparation, 1.5 hours for the exercise and 1 – 1.5 hours for plenary presentation and discussion.



Remember to document the results. Annex III has templates that may be helpful.



Add-on: Annex V includes a Participatory Vulnerability Assessment that provides for a systematic assessment of particularly vulnerable groups within a community.

Women's group preparing Hazard Impact Matrix, Georgia



Presentation of women's Hazard Impact Matrix, Democratic Republic of Congo



Presentation: Climate change trends

This session is based on the research from Module 1. Facilitators should adapt their language and approach to the local level of knowledge and understanding and try to connect the local climate phenomena and analysis to world- wide trends.

The **objectives** of this session are to:

- Raise awareness of projected trends of climate change and the prospects for worsening conditions
- Discuss the consequences of an increase in climate hazards on the community
- Provide participants with information on existing adaptation policies or practices at the national and regional level
- Raise awareness that other countries and communities might experience similar impacts, and that knowledge and experience sharing can help communities adapt to climate change.

In some cases, facilitators may want to discuss global emissions and climate policy, particularly where related projects – such as large-scale afforestation – might affect the local population.

What you should consider when preparing for your presentation

The **presentation** should:

- Connect to the experiences of the community: go from local to global, and back to local
- Be adapted to the conditions that you find in the village during the PACDR meetings
- Be in easy (local) language, understandable for community members, including the elderly and those with low levels of formal education.
- Consider that indigenous and local knowledge is often relayed via oral story-telling and figurative language.

Which figures and numbers do you really need? How can you simplify?

- Dare to be creative! For example, you may find local materials that you can use to illustrate your explanations (e.g., cooking tools to explain the greenhouse gas effect)

Possible elements of your presentation:

- Local weather and climate records
- Impacts of climate change beyond the community
- Climate change trends
- Climate politics
- Examples of best practice

⇒ Please refer to Annex VI C to F for more information.



Annex VI provides ideas of how to prepare this material.



Add-on:

Annex V includes ideas for games that could be played here **Paying for Prediction** or **The Greenhouse Gas Game**.



The presentation should be limited to 30 minutes or less. Plan another 30 minutes for questions and discussion.



Playing a climate change game,
Nepal



Mangrove planting

Module 4: Adaptation and risk reduction options

Survey and assessment of existing community responses and additional risk reduction and adaptation options to reduce climate change and disaster risks



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Module 4 reviews and evaluates the effectiveness and feasibility of community responses and additional options to address the impacts of current climate and other hazards and summarizes and interprets the results
.....

Exercise 6

Current community responses and additional options

In this exercise, participants complete tables that list the main hazards, their related impacts on livelihoods, and the responses that people in the community already use to reduce the negative impacts. Participants identify and discuss additional relevant response options. Facilitators then guide the participants in the evaluation of these responses.

The **objectives** of this exercise are to:

- Identify and evaluate currently practiced community responses
- Build awareness about the existing capacities and skills of the community to respond to challenges with their local resources (“We have the courage and the capacities to cope with hazards!”)
- Discover additional measures and strategies needed to address the root causes of the high vulnerability of specific groups of people as well as assets and resources
- Identify additional responses for climate change adaptation and risk reduction which are effective and feasible
- Identify challenges of implementation

Hazard: Flood			
Hazard impacts	Existing community responses	Additional options	Challenges, risks, needed support



Facilitation

This exercise is carried out in separate gender groups (and minority groups if applicable). Sheets of paper at least 80 cm x 100 cm in size are prepared in advance (see example left). Work on the two or three hazards having the strongest impact on livelihood resources from the Hazard Impact Matrix. For each hazard, two sheets are prepared: one for each gender group.

Blank sheet: Existing responses, additional options, challenges, risks and needed support

First, in plenary the facilitator explains to the participants the procedure of the exercise and reminds them about the impact chain and that they will focus on the primary impacts of the main hazards in the community. Then the groups split after having been given markers and cards in multiple colours.

In the groups, the participants identify primary impacts for the first hazard. Facilitators note them on coloured cards.

After having identified all primary impacts, the first most important impact agreed upon by the participants is stuck to the hazard response sheet in the first column.

The **second** column lists the practices (written on coloured cards) that the participants report they or others in the community use in response to this impact. Once participants can no longer think of existing practices, they identify additional practices that might be well-suited to address the impact and thereby the hazard. These are added in the third column but on different coloured cards.

Facilitators remind participants to keep in mind that the proposed activities should be linked to dealing with climate change and/ or natural disasters.

Facilitators might want to give some examples of what suitable practices entail to provide participants with a better idea of what this exercise is trying to accomplish.

The following questions provide additional guidance:

- **Which existing practices are considered insufficient to address the identified impacts and to reduce the vulnerability of exposed resources and assets?**
- **What additional actions would be needed to reach long-term resilience?**
Try to address the exposure and vulnerabilities (i.e., root causes) which lead to the negative impacts on groups of people and assets with the identified risk reduction options! To reduce exposure, ask whether it is possible to choose a different location for the exposed residential site or infrastructure. Additionally, try to identify and reduce drivers of vulnerability, which in combination with the exposure and hazard could lead to the negative impacts. These include technical or structural vulnerabilities (e.g., type of construction), social vulnerabilities (e.g., gender inequalities in literacy), political vulnerabilities (e.g., missing regulations or land use plans) and ecological vulnerabilities (e.g., deforested, depleted land).
- **Are there other missing responses or steps to consider?**
Assessing effectiveness and feasibility of risk reduction options
Once no further practices can be identified, participants assess all (existing and additional) responses/risk reduction options with regards to their effectiveness and their feasibility. To assess the effectiveness, the participants are asked to discuss the extent to which the practice reduces the impact of the hazard. To assess the feasibility, the participants are asked to discuss the extent to which the community can implement the practice by themselves and/or with support they can realistically draw upon. This speaks to the community's capacity to implement the proposed response option.
When assessing effectiveness and feasibility, it is important to note how responses are perceived by marginalised groups (e.g. women and/ or minority groups). Additional criteria for the assessment of the responses can be added if required.



You may display the impact chain developed during the introduction session (module 2) to support your explanation of "primary impacts".



Effectiveness and feasibility depend on context. There is no absolute right or wrong ranking, but facilitators need to ask probing questions to ensure a good understanding of the concepts of effectiveness and feasibility. It is important to take time during preparation of the PACDR analysis to find a good and meaningful translation of both terms into the local language.



Plan one hour for team preparation, 1.5 – 2 hours for the completion of the sheets, and 1 – 1.5 hours for plenary presentation and discussion.



Facilitators can guide the participants to collect existing responses and local practices by reminding them that they should only list what they are actually doing, not what they think they should be doing. Some responses may be harmful, such as stealing, but should still be listed and discussed.



Remember to document the results. Annex III has templates that may be helpful.

Discussion

The degree of effectiveness and feasibility is assessed by using a similar method to the Hazard Impact Matrix (0, 1, 2, 3) by using symbols: stars (*) for effectiveness and circles (o) for feasibility (o). You may use other symbols or numbers according to your own and the participants' preferences.

*** or ooo	= High effectiveness or feasibility
** or oo	= Medium effectiveness or feasibility
* or o	= Low effectiveness or feasibility
-	= Not effective or not feasible

Note the degree of effectiveness and feasibility on each card.

When all cards have been evaluated for the first negative impact, draw a horizontal line and work on the next negative impact as described above.

For all the following hazard sheets, proceed accordingly.

Challenges, obstacles, risks and required external support

The existing and additional responses and options may present challenges, obstacles, risks, and potential negative trade-offs. Additional resources may be needed for implementation. These points should be noted on different coloured cards and displayed in the last column, indicating on each card to which response or option they belong to.

- ... Do the identified DRR and adaptation practices have potential negative consequences? Conflict between user groups such as farmers vs. pastoralists? Increased workload for one gender more than the other? Environmental impacts on people upstream or downstream of the community?
- ... Are the identified DRR and adaptation practices accessible to all community members? Do some community members have (more) power to access these measures (risk of gatekeeping)?
- ... Which responses offer further opportunities (co-benefits/ additional benefits)? For example, agroforestry may generate additional income via the production of timber. These can also be noted down on different coloured cards.

After having completed the first hazard sheet, continue with the next hazard sheet.

Hazard: <u>Flood</u>			
Hazard impacts	Existing community responses	Additional options	Challenges, risks, needed support
Soil erosion	Build weirs ** oo Contour ploughing and sowing ** ooo Filling of gullies ** o	Agroforestry ** oo Soil bunds + terracing *** o Reforestation of hilltops ** o Land use planning and compensation for farmers * o	Agroforestry: Land dispute Terracing: Training & funding
Water pollution	Boil water *** oo Treat water ** o Fetch water in neighbouring villages *** oo	Information campaign on safe water ** ooo Water tanks *** o Establish early warning committee ** ooo Hydrological resource mapping + spring development *** oo	Hydro mapping: Expertise & Funding Treat water & Water tanks: Funding
Loss of crops	Resowing, Replanting *** o Stealing of food ** o Borrowing of money to buy food *** o Looking for temporary jobs ** o	Building dikes *** o Agroforestry ** oo Develop rules + regulations for emergency fund *** oo Government food aid *** o Training + funds for crop diversification ** oo	Resowing: Where to get seeds from? Government aid: Access?

After completion of the sheets, facilitators bring the different groups back together. When analysing the results, participants can focus on how well the responses work in dealing with the negative impacts.

Facilitators may choose to use the following questions to guide the discussion:

- Where do the different group's tables agree, and where do they differ?
- Which impacts and responses are only identified in one of the sheets?
- Do some people face obstacles to implementing response measures others have suggested?
- What conclusions can be drawn from looking at the different degrees of effectiveness and feasibility?
- Which responses are most promising, and which are weak?
- Which responses address the needs of the most vulnerable groups?
- What obstacles stand in the way of implementing these practices?
- Which conflicts may arise due to the implementation of certain risk reduction options? (i.e. between men and women, between the community and political decision makers, between the rich and the poor)
- Where are additional resources required?

The main goal of the discussion is to identify the most promising existing climate change response actions and the most promising additional practices to successfully address climate change challenges. You may cluster the cards with the highest degree of effectiveness and feasibility and those with the lowest degree.

Facilitators should take care that gender and minority considerations are included and that agreed response options do not cause their situation to deteriorate (do no harm!).

Group work on adaptation options, South Africa



Village chief of Makeni, Sierra Leone comments the adaptation strategies



Module 5

Analysis and Synthesis of Results

Analysis of all exercises and preparation of a synthesis report



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In **Module 5** the facilitating organization (NGO, CSO) develops a synthesis report which summarizes the results of the community PACDR process thus far and draws conclusions as to vulnerabilities, most exposed groups and resources, and alignment with policies and programmes identified in Module 1.
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The objectives of this module are to:

- Ensure that all participants share the same understanding of the process thus far.
- Ensure a common understanding and clear view of the main results and conclusion.
- Prepare participants for the action planning.

Exercise 7

Synthesis report

In exercise 7, the facilitation team summarizes and analyses the information collected from the community members (exercises 2-6) and compares it with the desk research conducted in module 1 (exercise 1). All information is used to answer the guiding questions of the synthesis report (see below), which should help to get a more nuanced picture of the hazards, vulnerabilities and promising adaptation options in the community.

Guiding questions for the **analysis of hazards and impact**

KEY QUESTIONS	INFORMATION TO CONSIDER
What are the most important hazards in the community? In which month/season do they take place?	<ul style="list-style-type: none"> • Extreme events affecting the community • Observed seasonal pattern of hazards
What are most important trends and changes of hazards (backward looking)?	<ul style="list-style-type: none"> • Observed changes in weather and seasonal patterns • Observed changes in temperature, rainfall and extreme weather events
What are the expected future trends and changes of hazards (forwards looking)?	<ul style="list-style-type: none"> • Expected/ projected changes in temperature, rainfall and extreme weather events as well as in weather and seasonal patterns
What are the most important negative impacts of the hazards? Which localities and livelihood resources are exposed and affected?	<ul style="list-style-type: none"> • Negative impacts per hazard type • Hazard-prone locations and livelihood resources per hazard type
How may the negative impacts change in future taking into account the climate projections?	<ul style="list-style-type: none"> • Expected trends in negative impacts per hazard type & hazard-prone location and livelihood resource
Which are the most exposed and affected people and groups? Why?	<ul style="list-style-type: none"> • Group of people and grade/type of affectedness (per hazard) • Root causes (exposure and vulnerability factors) for the impacts per group of people
Which specific negative effect do hazards have on women and on men? Why?	<ul style="list-style-type: none"> • Gender disaggregated grade/type of affectedness (per hazard) • Root causes (exposure and vulnerability factors) for the different affectedness
What are the most exposed physical assets, livelihood resources and service in the community? Why?	<ul style="list-style-type: none"> • Assets, livelihood resources and services and their grade/type of affectedness (per hazard) • Root causes (exposure and vulnerability factors) for the impacts
How well prepared is the community to cope with the hazards – currently and in the future? What is missing?	<ul style="list-style-type: none"> • Current and future adaptive/ coping capacities of the community (based on the currently implemented risk reduction measures) • Missing capacities to cope with the negative impacts

Guiding questions for the **analysis of risk reduction options**

KEY QUESTIONS	INFORMATION TO CONSIDER
<p>Which identified risk reduction options seem to be the most promising ones?</p> <p>Will they remain effective in relation to changing climate risks?</p> <p>Are they sustainable in the future?</p>	<ul style="list-style-type: none"> • Revision of assessment of effectiveness and feasibility of risk reduction options • Effectiveness and feasibility under (future) climate change • Assessment of (future) sustainability (economical, social, ecological and political)
<p>Which risk reduction options specifically address the vulnerabilities, needs and capacities of marginalized or vulnerable groups?</p> <p>Are there risk reduction options that might harm the situation for these groups?</p>	<ul style="list-style-type: none"> • Assessment whether risk reduction options address the vulnerabilities, needs and capacities of women and other groups • Possible negative effects of risk reduction options
<p>What factors (could) enable different people to implement the risk reduction options?</p>	<ul style="list-style-type: none"> • (Access to) information, knowledge and capacities • (Access to) livelihood assets and services • Governmental support and policies
<p>What are the barriers different stakeholders face in implementing the risk reduction options?</p>	<ul style="list-style-type: none"> • Gaps in information, knowledge and capacities • Lack of access to and control over livelihood assets and natural resources • Gender differences in access to information, livelihood assets, and services, as well as in decision-making processes
<p>Which institutions or projects of donors work on which risk reduction options and could be contacted for required support (refer to Module 1)?</p>	<ul style="list-style-type: none"> • List of identified risk reduction option • Governmental programmes and initiatives in the field of disaster risk reduction and climate change adaptation in the area • Donor activities in the field of action in the area

The analysis of hazards and impacts, vulnerabilities and risk reduction options establish the synthesis report which will be presented to and validated by the workshop participants in the next module.

The report can stand alone as a “Community climate and disaster risk assessment report” that can inform other, ongoing community processes and largescale assessments, or help to develop project proposals of the NGO.

Module 6:

Community action planning

Development of an action plan and community presentation



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In **Module 6** the synthesis report is shared and discussed with the community participants and some external resource persons. Risk reduction options are prioritised and used for developing a community action plan. The results of the PACDR process are presented by the participants to the wider community. Finally, post-workshop activities are determined.

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Presentation of the synthesis



Be aware of the risk of domination by people external to the community. Government officials and experts tend to talk a lot and push their agendas. Community members may withdraw and remain silent. Use your facilitation skills to ensure everyone's equal participation.

The **objectives** of the presentation are to:

- Ensure that everyone shares the same understanding of the process thus far
- Ensure a common understanding and clear view of the main results and conclusions
- Provide additional information and considerations from external resource persons

After having only worked with community members and local government thus far, external experts should be invited to participate in the following steps, e.g., from agricultural authority, extension service, disaster risk reduction service, meteorological service, leadership from local government authorities, research, NGOs.

The selection of these persons should consider their position in local government, their expertise and experience, and their ability and willingness to contribute to concrete actions, as well as to access the necessary resources.



The presentation should not exceed 30 minutes. Plan 30 minutes for plenary discussions.

Facilitation

Before starting, all exercise sheets (Exercises 2 to 6) must be displayed on the walls.

Facilitators present the synthesis report to the extended workshop audience, referencing each exercise to demonstrate that the report is consistent with community opinions.

The presentation may be done with cards or on sheets.

The participants then discuss and validate the findings and conclusions.

Important changes and contributions are written on cards and added to the respective sheets.

The external participants should especially contribute their knowledge as to sectoral plans, local development plans, governmental programmes and donor programmes or activities.

Development of an action plan

Exercise 8

The **objectives** of the exercise are to:

- Develop an action plan that addresses the most harmful hazards and increases the resilience of households and the entire community

The action plan should:

- Identify concrete activities
- Differentiate between individual/household and collective action
- Identify where other stakeholders are needed for specific activities and support (knowledge, technology, funding)
- Identify limiting external factors and key advocacy issues and steps to take towards government institutions

The action plan is not a full community development plan – which requires a longer planning process – but the results can and should inform any community development planning that may follow.



Help the participants to be as specific as possible.

Step 1: Prioritization of risk reduction options

It is not feasible to consider all existing and additional risk reduction and adaptation options in the action planning. Therefore, a selection must be made focusing on the most relevant and important options.

Facilitation

The facilitation team displays all the sheets from Exercise 6 and fix a blank sheet of at least 80 cm x 100 cm in size on the wall. The facilitator asks the participants to form buzz groups consisting of 3 to 4 persons. These groups can be mixed or homogenous (males, females, external persons) depending on the previous degree of participation and domination of some participants.

Each group gets 5 coloured cards and a marker. They then discuss and write their 3 to 5 most important and relevant DRR and adaptation options on these cards considering the following aspects:

- Highest scores of effectiveness in terms of reducing the negative impact of hazards (risk reduction)
- High feasibility: the community has or can access needed resources and capacities
- Strengthening community collaboration and cohesion
- Benefits to the most vulnerable and exposed groups
- Having a positive impact on many households in the community



- **Alignment with existing community development plans and government programmes**
- **Potential additional benefits such as:**
 - **Increased food security and other livelihood benefits to many households in the community**
 - **Strengthened ecosystem services such as water and nutrient cycle/ healthy soils etc.**

Additional criteria for the prioritisation of DRR and adaptation options can be defined by the facilitators and the community as needed.

Facilitators should take care that consideration of gender and minority group positions are included, and that agreed response options do not cause their situation to deteriorate (do no harm!).

After 15 minutes, the groups give the cards to the facilitators who then read and stick them on the blank sheet. Similar cards are clustered. These priority risk reduction options are used in the following Exercise 8.

Step 2: The action plan



Facilitation

The exercise is done in a plenary session.

The facilitation team prepares several sheets of at least 100 cm x 150 cm in size and draws a table with 4 columns: Risk reduction/adaptation measure, action on household level, action on community level and required external action/support. The facilitator fixes a prepared sheet on the wall and sticks the card with the most important risk reduction/climate adaptation option identified in the prioritisation exercise in the first column.

Ask the plenary to propose concrete actions of households, community, and external organizations.

The guiding questions for the exercise are:

- **What concrete activities are needed to implement the prioritized risk reduction options?**
- **Which activities can be done at household level?**
Who within the household will be responsible for the action?
- **Which activities are collective and need to be guided by community institutions? Which institutions?**
- **Which activities can be implemented with existing community resources?**
- **Which activities require external support?**
What potential funding streams could be tapped?
Who can provide required external knowledge and skills?
- **Should an advocacy or lobby campaign be considered?**

Facilitators may remind participants to consider the obstacles identified in Exercise 6, based on which appropriate countermeasures and actions are identified.

Write the responses of the participants on different coloured cards (see example) and stick them in the respective column.

If no other suggestions are mentioned, stick the next important risk reduction option card underneath, and proceed accordingly. If you run out of space, use the next prepared sheet.

The example below illustrates what the action plan could look like.

Sample format for Action planning

Adaptation/Risk reduction options	Actions on Household level	Actions on Community level	Needed External Support
Agroforestry	<ul style="list-style-type: none"> Establish private tree nurseries Plant trees around the house Plant hedges 	<ul style="list-style-type: none"> Establish community tree nursery Organise visit of agroforestry farmer in XY Search for volunteer pilot farmers Hold farmer field school events monthly 	<ul style="list-style-type: none"> NGO helps organising agroforestry visit Extension service gives agroforestry training
Farmer seed exchange	<ul style="list-style-type: none"> Improve seed storage 	<ul style="list-style-type: none"> Organise annual seed exchange fair Women SHG to share seeds at special event 	<ul style="list-style-type: none"> Extension service provides new varieties NGO trains on seed production
Irrigation of vegetable gardens	<ul style="list-style-type: none"> Dig shallow wells Use of wastewater for irrigation 	<ul style="list-style-type: none"> Ask for government expertise and funds Establish an irrigated school garden Organise survey of irrigation potentials Establish an irrigation scheme 	<ul style="list-style-type: none"> Access to district irrigation fund Extension service provides information on rules & regulations



Try to get commitments to implement the activities from any elected officials and representatives of groups who are present for this exercise.



Plan at least 2 hours for the development of the action plan and 45 minutes for discussion and closure.

Once the action plan has been completed, a working group needs to be formed consisting of some workshop participants and community leaders to put the plan into practice (who does what, when, how, with whom, when, etc.).

Discussion

Facilitators should reinforce the participants' commitment to the PACDR process and the action plan by clarifying the following points:

- Who will participate in the working group (steering committee) to plan and monitor the implementation of the action plan?
 - Who will present the workshop findings and results to the wider community?
- A mixed gender group should do this. The facilitators help the selected people prepare the presentation.

The facilitation team should take the opportunity to explain any further involvement of their organisation in the implementation of the action plan.



Community presentation



The presentation of the workshop results is always a moment of excitement. Participants are proud of their work and eager to present it to their community and local leaders.



Make sure that stakeholders who are required for the implementation of the community adaptation actions are present. Opportunity for them to give feedback and get more on board will come during discussion on concrete steps to be taken.



Plan not more than one hour for the presentation and 45 minutes for the discussion and wrapping up

In this final step, the results of the PACDR community process are presented by selected female and male participants to the whole community and several external stakeholders. This is aimed at creating confidence and ownership amongst the community members who have not participated in the process, and should assist in garnering their active support and participation in the implementation of the action plan.

External stakeholders to invite to the presentation include:

- Local government officials
- NGOs and CSOs
- Research institutes
- Agriculture extension services
- Large and significant landowners
- Private businesses
- Regional or national government officials

And any other persons suggested by the participants.

To attract the wider community, the meeting could be organized to coincide with or include other popular events, such as a soccer game or an agricultural fair. If the community is very big, consider organising two or more presentations.

Make sure that the community meeting is thoroughly prepared and announced well in advance.

Look for an appropriate venue and the necessary technical equipment. All workshop posters should be displayed and briefly explained during the presentation. The team of presenters should focus on the most important findings, conclusions, planned actions, and the way forward.

After the presentation, the audience is given the opportunity to ask questions and to discuss relevant issues. Both workshop participants and the facilitation team can respond to the questions.

Government officials and services should talk about their impressions of the process and their commitment to support the community to become more climate resilient. The facilitating organisation wraps up the meeting by giving some information about their further involvement.

PACDR workshop report

The results of the PACDR process should be documented in a report compiled by the facilitating organisation that can then be used to inform other planning processes and to approach external stakeholders for assistance or advocacy.

The “Participatory Assessment of Climate and Disaster Risks for (name of community): Findings, Recommendations and Actions” report consists of the compilation of background materials in Module 1, the synthesis of the results from Modules 2 to 4 and the Action Plan:

- **Community Profile and relevant background information (Exercise 1)**
- **The assessment of climate and other hazards, impacts and responses (Exercises 2 – 6)**
- **The conclusions of the synthesis (Exercise 7)**
- **The Action Plan (Exercise 8)**
- **Responsibilities and commitments of the community and other stakeholders (from the Steering Committee)**

If the reporting templates from Annex III have been used and filled in with the results at the end of each module, they can be collated and serve as a basic report. They should be supplemented with a title page and an introductory section.

Post workshop activities

The most concrete output of the PACDR community process is the Action Plan including prioritized measures to be taken in the coming weeks and months, both on a household and community level, and with specific support needs identified by external institutions and organizations.

The action plan must be put into practice and monitored by an elected working group composed of workshop participants and community authorities. They will be expected to make contact with organizations and government institutions to negotiate required support (expertise, technical advice, funding, advocacy).

The facilitators/ facilitating NGO or CSO should play a supportive and advising role in the implementation and monitoring of the action plan. In particular, the following questions need to be clarified:

- **Which activities can be supported technically, financially or with advocacy by the NGO/CSO as part of a separate project?**
- **Which risk reduction option(s) should be implemented by other entities (the municipality, sector agencies, NGOs, donors)? How can they be persuaded and supported by the NGO/CSO to take on this role?**
- **What other processes can be supported by the NGO/CSO to promote a conducive governance framework (e.g. policy development, local regulations, land use planning, etc.)?**
- **Which organizations and government agencies should the NGO work with and how?**
- **How will community cooperation be organized with regard to the prioritized activities?**
- **Which monitoring processes should be established and what role do local actors play in this?**



Funding of adaptation measures is crucial for a successful process. From the very beginning of the PACDR process, NGOs must work on funding possibilities (e.g. own budget, government funds, linking communities to funders).

Community presentation,
Tanzania



Erosion control with terraces



Sources of further information for collecting background information during Module 1

Climate change knowledge and scenarios

Climate Watch – country profiles by World Resources Institute and partners:

<https://www.climatewatchdata.org>

Intergovernmental Panel on Climate Change (IPCC) (2022) regional analysis chapters:

<https://www.ipcc.ch/report/ar6/wg2/>

IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (2019) -
Cartoon summary of the by the Red Cross Climate Centre:

<https://www.climatecentre.org/downloads/files/SROCC%20Version2%20%281%29.pdf>

World Bank Climate Change Knowledge Portal:

<https://climateknowledgeportal.worldbank.org/>

National policies and frameworks

Climate Action Tracker: <https://climateactiontracker.org/countries/>

NAP Central. National Adaptation Plans submitted to UNFCCC:

<https://www4.unfccc.int/sites/napc/Pages/Home.aspx>

National Communications submitted to the United Nations Framework Convention on
Climate Change (UNFCCC): <https://unfccc.int/non-annex-I-NCs>

NDC Registry. Nationally Determined Contributions submitted to UNFCCC:

<https://www4.unfccc.int/sites/ndcstaging/Pages/Home.aspx>

NDC Partnership country pages: <https://ndcpartnership.org/countries-map>

PreventionWeb knowledge platform on disaster risk reduction,
including country profiles and access to national DRR plans and policies:

<https://www.preventionweb.net/knowledge-base/continents-countries>

Please also consult:

- *Websites of national climate change, meteorology, disaster risk and environmental institutions*
- *Websites and country pages of donor agencies and NGOs active in your country*

Practical guidance on climate change adaptation and disaster risk reduction

BRACED (2018) A 1.5°C warmer world: a guide for policy-makers and practitioners.

<http://www.braced.org/resources/i/A-15-warmer-world-A-guide-for-policy-makers-and-practitioners/>

CCDB Climate Portal: <https://climateportal.cdbbd.org/>

Climate Centre of the International Federation of Red Cross:

<https://www.climatecentre.org>

ReliefWeb humanitarian situation reports: <http://reliefweb.int/countries>

Voluntary National Reviews database, on country progress towards Sustainable Development Goals: <https://hlpf.un.org/vnrs>

WeADAPT knowledge platform on climate change adaptation:

<https://www.weadapt.org/>

Other tools

CARE (2019) Climate Vulnerability and Capacity Analysis Handbook – Informing community-based adaptation, resilience and gender equality – Version 2.0.

(Available in English and French versions): <https://careclimatechange.org/cvca/>

IFRC and the Red Cross Red Crescent Climate Centre (2019) Climate Training Kit:

<https://climatecentre.org/training>

IISD (2012). CRiSTAL - Community-based Risk Screening Tool – Adaptation and Livelihoods. (Available in English, French and Spanish versions):

<https://www.iisd.org/cristaltool/>

IISD & UNEP (2018). Adaptation, Livelihoods and Ecosystem (ALivE) Planning Tool:

User Manual. (Available in multiple language versions): <https://www.iisd.org/library/alive-adaptation-livelihoods-and-ecosystem-planning-tool-user-manual>

Gender and Climate Change

CARE resources on gender and climate change:

<https://careclimatechange.org/what-we-do/gender/>

Gender CC – Women for Climate Justice: <http://www.gendercc.net/>

Women’s Environment & Development Organization (WEDO): <http://www.wedo.org/>

Glossary

Adaptive capacity “The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences.” Adaptive capacity is what enables people to make adjustments to protect their lives and livelihoods from the impacts of climate change. It is generally applied outside of crisis periods, based on learning from past shocks and stresses. It can help to reduce future risks. (Source: CARE 2019, IPCC 2019)

Carbon dioxide (CO₂) Carbon dioxide is a gas that is naturally present in the Earth’s atmosphere. It helps to trap heat from the sun, which keeps the Earth warm enough to support life. However, too much carbon dioxide in the atmosphere can cause problems. It acts like a blanket around the Earth, trapping more heat than needed and leading to a rise in temperature (global warming). We often produce carbon dioxide when we burn fossil fuels (such as oil, gas, and coal) or biomass (organic material from plants and animals, such as wood and manure). It is also released to the air from of land-use changes (such as deforestation) and industrial processes (e.g., cement production). (Source: modified from IPCC 2019)

Carbon sequestration This process helps to reduce the amount of carbon dioxide (CO₂) in the atmosphere. It involves capturing carbon dioxide from the air or preventing it from being released. Plants and trees naturally perform carbon sequestration and can absorb carbon dioxide from the air and use it to grow (photosynthesis). As a result, processes such as reforestation and land management changes can help to remove carbon dioxide from the atmosphere and mitigate global warming (Source: modified from IPCC 2019).

Carbon sink A carbon sink is a (natural or artificial) system that absorbs carbon dioxide from the atmosphere and stores it as solid carbon. Some important carbon sinks include forests, wetlands, soil, and oceans. (Source: modified from IPCC 2019)

Climate Climate refers to the average weather in a particular area. It describes the mean of temperature, rainfall, wind etc. over a relatively long period of time (typically 30 years). While weather can change rapidly, climate represents the overall patterns of weather conditions. For example, average temperatures in a village are consistently high and it rarely rains. The climate is hot and dry. One day there is rain. The weather for this day is rainy, but it does not change the climate.

Climate change Any change in climate over time. In principle, climate change can be due to natural processes or a result of human activity. In our days, it is often used to describe the changes caused by human activities, which include burning fossil fuels (like coal, oil, and gas) and deforestation. These human activities have released large amounts of greenhouse gases, including carbon dioxide (CO₂), into the atmosphere. These gases trap heat from the sun and cause the Earth’s temperature to rise. This is commonly referred to as global warming, which is a part of climate change. Climate change can result in various effects, such as rising sea levels, changes in rainfall patterns, more frequent and intense heatwaves, altered ecosystems, and shifts in plant and animal habitats. These changes can have significant impacts on human societies, including food production, water resources, and overall environmental conditions.

(Climate change) Adaptation Climate change adaptation refers to actions and strategies that individuals, communities, and societies take to adjust and prepare for the impacts of climate change. It involves making changes in our lives and systems to better cope with the challenges and changes brought about by shifts in the Earth’s climate. It is about being proactive and planning to reduce risks and vulnerabilities associated with a changing climate. Adaptation can involve individual actions like planting drought-resistant crops in agriculture. Communities can implement measures like building flood defenses, developing early warning systems, or constructing climate-resilient infrastructure. At a broader societal level, governments and organizations can create policies and plans to support adaptation efforts, invest in research and technology, and promote sustainable practices. (Source: CARE 2019, IPCC 2018)

**(Climate change)
Mitigation**

This word has different meanings for practitioners in the climate change and disaster risk reduction communities, often leading to confusion.

Mitigation (climate change)

Measures to reduce greenhouse gas concentrations in the atmosphere, and thus ultimately the magnitude of climate change. Measures include energy conservation, using renewable energy such as wind or solar energy instead of coal, oil or gas; and planting trees that absorb carbon dioxide from the atmosphere.

Mitigation (disaster management)

Measures aimed at moderating or reducing the severity of disaster impact. They include such things as retention walls, water reservoirs, and reforestation to avoid landslides. From the perspective of the climate change community, these measures would be labelled as “adaptation” because they help reduce the negative impacts of climate change. (Source: IFRC 2007)

Climate risk management

Climate risk management is an approach to identify, assess, and effectively manage the risks and uncertainties associated to current variability and extremes in weather as well as to long-term climate change. Often it is used simultaneously to climate change adaptation. It involves monitoring and reviewing the effectiveness of these strategies over time, making adjustments as needed, and continually learning from new information and experiences. Climate risk management is similar to working on disaster risk reduction, with the only difference that the focus is on climate related hazards and risks only (e.g. floods but no earthquakes).

Co-benefits

Co-benefits refer to additional positive outcomes that arise as a result of pursuing a particular risk management action or strategy. These benefits are in addition to the primary goal of risk reduction. Careful consideration and design of risk management measures can increase co-benefits, while minimizing potential costs. For example, climate and disaster risk reduction can also contribute positively to climate change mitigation as well as employment, environment, health, reducing poverty levels, food security, gender relations etc. (Source: modified from IPCC 2019)

Disaster

A sudden and severe event that causes significant damage, destruction, and disruption to human lives, property, and the environment. Disasters can take various forms, such as climate related disaster like floods, geological disasters like earthquakes, or they can be human made, such as industrial accidents or wars. Disasters are events that overwhelm the ability of affected individuals, communities, or societies to cope with its impacts. (Source: IFRC 2007)

Disaster risk reduction

Disaster risk reduction aims to reduce the impact of disasters and increase the resilience of communities and societies. It is a systematic process of implementing measures, strategies, and policies to reduce the impacts of natural hazards and related environmental and technological effects. This includes, among other things, prevention, preparedness, response, recovery and rehabilitation. Often the term disaster risk management is used interchangeably (Source: IFRC 2007)

Ecosystem

An ecosystem is a community of living organisms (such as plants, animals, and microorganisms) and their surrounding physical environment (like air, water, and soil). It's like a big web of life where different organisms interact with each other and their surroundings. Humans are an integral part of ecosystems. (Source: CARE 2019, MEA 2005)

Ecosystem services

Ecosystem services are the benefits people obtain from ecosystems. These include provisioning services such as food, water, timber and fiber; regulating services such as climate regulation and water purification; cultural services that provide recreational, aesthetic and spiritual benefits; and supporting services such as soil formation, photosynthesis and nutrient cycling. (Source: CARE 2019, MEA 2005)

Fossil fuels	Fossil fuels are energy sources that come from the remains of ancient plants and animals that lived millions of years ago. Over time, these remains were buried deep in the Earth and subjected to heat and pressure, transforming into fossil fuels. The three main types are coal, oil, and natural gas. Fossil fuels have been the primary source of energy for humans for many years, because they release a large amount of energy when burned. But burning them also releases carbon dioxide and other greenhouse gases into the atmosphere. This causes climate change and air pollution.
Gender	A social construct that defines what it means to be a man or woman, boy or girl in a given society. It carries specific roles, status, behaviors and expectations within households, communities and culture. Individuals may also self-identify as neither male or female, or both male and female. There are different sexual orientations and gender identities. The initials LGBTIQAP refer collectively to people who are lesbian, gay, bisexual, transgender, intersex, queer, asexual or pansexual. (Source: modified from CARE 2019)
Gender equality	The equal enjoyment by people of all genders and ages of rights, opportunities, resources and rewards. Equality does not mean that all genders are the same but that their enjoyment of rights, opportunities and life changes are not governed by whether they were born female or male. (Source: CARE 2019)
Global warming	The long-term rise in average temperature on earth due to the increasing amounts of greenhouse gases from human activities in the atmosphere. These gases create a sort of "blanket" around the Earth, trapping heat and causing the planet to warm up. The main greenhouse gas responsible for global warming is carbon dioxide, which is released when we burn fossil fuels like coal, oil, and gas for energy production, transportation and other activities. Another even stronger greenhouse gas is methane, which is mainly emitted from agricultural activities. (Source: IFRC 2007).
Greenhouse gas (GHG)	Greenhouse gases, such as carbon dioxide or methane, exist in the Earth's atmosphere. They trap sunlight and re-emit it back towards the Earth's surface, where it warms the plane (like in a greenhouse). This process increases the mean temperature on the Earth from -18°C to +15°C, making it livable for humans. When pollution adds more of these gases to the earth's atmosphere, more heat from the sun is trapped, leading to an increased warming of the earth's surface. This process is known as "global warming" and contributes to climate change. (Source: IFRC 2007)
Hazard	It refers to an extreme natural event that may cause loss of life or injury, property damage, social and economic disruption or environmental degradation. (Source IFRC 2007)
Livelihoods	The resources used and the activities undertaken in order to live. Livelihoods are usually determined by the entitlements and human, social, natural, physical or financial assets to which people have access. (Source: CARE 2019, IPCC 2018)
Nationally Determined Contributions (NDCs)	NDCs refer to the climate action plans and commitments that each country voluntarily puts forward to address climate change and reduce greenhouse gas emissions. They are an important part of the global efforts to combat climate change under the United Nations Framework Convention on Climate Change (UNFCCC). Some countries also address in their NDSs how they will adapt to climate change impacts, and what support they need from, or will provide to, other countries to adopt low-carbon pathways and to build climate resilience. According to the Paris Agreement, each Party shall prepare, communicate and maintain successive NDCs that it intends to achieve. (Source: IPCC 2019)
Paris Agreement	The Paris Agreement is a global treaty signed by countries to fight climate change. Its goal is to limit global warming and reduce greenhouse gas emissions. Countries submit plans (NDCs) outlining their actions to address climate change. The agreement entered into force on 4 November 2016 under the United Nations Framework Convention on Climate Change (UNFCCC). It promotes cooperation and transparency among nations to strengthen their ability to deal with climate change impacts and create a sustainable future. (Source: IPCC 2019)

Renewable energy Renewable energy uses energy sources that are naturally replenished and won't run out. These sources include sunlight (solar energy), wind, water (hydropower), and organic material (biomass).

Resilience Resilience is the ability to prevent, prepare for, bounce back, and recover from shocks like disasters. It is the capacity of social, economic, and ecological systems to avoid and cope with a hazardous event, trend, or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure while also maintaining the capacity for adaptation, learning and transformation. Resilience is about managing risk and dealing with shocks and stresses that negatively influence people's lives. (Source: CARE 2019, IPCC 2019)

Risk The probability of harmful consequences due to interaction between hazards and vulnerable conditions in risk-prone areas (exposure). (Source: IFRC 2007)

Sendai Framework for Disaster Risk Reduction The Sendai Framework for Disaster Risk Reduction 2015–2030 is an international agreement which aims to promote the protection of lives, livelihoods, and infrastructure by focusing on disaster risk reduction and promoting a culture of disaster resilience at all levels. The voluntary, non-binding agreement recognizes the need for a multi-sectoral and inclusive approach involving governments, communities, organizations, and individuals. (Source: IPCC 2019)

Vulnerability The degree to which someone or something can be affected by a particular hazard (from sudden events such as a storm to long-term climate change). Vulnerability depends on physical, social, economic, and environmental factors and processes. It is related, for instance, to the places where people live (exposure), the strength of their houses, the extent to which their crops can survive adverse weather, or whether they have organized evacuation routes and shelters.

Physical and environmental vulnerability relate to the natural and built environment and may be described as "sensitivity". Physical vulnerability is e.g., determined by the type of construction of a house; environmental vulnerability, e.g., by extent of natural resource degradation, such as deforestation.

Socio-economic vulnerability is influenced by such aspects as family ties and social networks, age, ethnicity, literacy and education, health infrastructure, the state of peace and security. Less privileged classes or castes suffer disproportionately larger losses in disasters and have limited capacity to recover. Similarly, an economy lacking a diverse productive base is less likely to recover from disaster impact which may also lead to forced migration. Socio-economic vulnerability may be described as "(lack of) coping capacity". (Source: IFRC 2007)

References for glossary

CARE (2019) Climate Vulnerability and Capacity Analysis Handbook - Informing community-based adaptation, resilience and gender equality - Version 2.0
<https://careclimatechange.org/cvca/>

IFRC (2007) Red Cross/Red Crescent Climate Guide
https://www.climatecentre.org/downloads/files/RCRC_climateguide.pdf

IPCC (2019): Annex I: Glossary. In: Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems.
https://www.ipcc.ch/site/assets/uploads/sites/4/2019/11/11_Annex-I-Glossary.pdf

Millennium Ecosystem Assessment (MEA) (2005). Ecosystems and Human Well-Being: Synthesis. <http://www.millenniumassessment.org/en/Synthesis.aspx>

This annex offers some important practical tips for preparing and conducting the PACDR assessment and planning with a community. Community consultations are the main analytical method employed in this tool. The tips come from experience with previous versions of this tool.

Module 1 might be done with little community involvement, but all the subsequent modules require maximum community participation to ensure community ownership. The facilitation team needs to ensure that the community process is well prepared, that the community members have confidence in the team, that expectations are openly discussed, and objectives are clear and realistic.

PACDR is not about data collection but about community empowerment and action. The facilitation team must therefore have excellent skills in participative methods.

Preparing for the community consultation: Plan carefully

- Select the community or respond to the request of a community. Important considerations include the willingness of the leaders to participate, contribute and carry out adaptation plans, the availability of participants, the existence of internal conflicts that might impede the process, and openness to sharing the PACDR experience with other communities.
- Decide on the geographical extent of the assessment, and make sure people from different locations in the area are consulted.
- Organize preparation meetings with the community authorities and leaders. Discuss the purpose, expectations, benefits, limits, requirements, expenses, duration and course of the PACDR process.
- Prepare a budget and set up a skilled facilitation team.
- Decide on whom to consult, considering the perspectives of gender and minority groups and potential conflicts among certain groups. Conducting a number of different consultations allows the facilitation team to appreciate the broad range of perspectives, priorities and needs within a community.
- With the help of community leaders, invite 15–20 women and 15–20 men, representative of a range of social and age groups within the community. These men and women form the group of participants for Modules 2–7. The goal in selecting participants is to have comprehensive representation and, ultimately, community ownership.
- Provide for separate gender groups, as well as for minorities if appropriate in Modules 2–5. The selection of participants is intended to ensure that separate group sessions are well balanced and sized for effective and inclusive participation.
- Consider the participation of local government representatives. They can foster ownership and may provide assistance in the allocation of resources, but can sometimes dominate groups to the exclusion of other participants.
- Seek involvement from other important actors linked to the community – agricultural extension, large landowners, researchers and non-governmental organizations, for example.
- Be aware of potential conflicts in the community and consider ‘do-no-harm’ methods.
- Remember that the people consulted might be illiterate, so you need to prepare the exercises accordingly. Where participants speak a language you don’t know, you need two competent interpreters to make sure that the results are accurate.

- Plan enough time for the participants to express their opinions clearly and completely so that the results of the consultations are valid. In addition, what the participants learn is an important benefit of the analysis, and the time required for this outcome is well spent.
- Remember that the participants' time is also valuable, and try to find a good balance between the benefits of participation and time spent away from other responsibilities.
- The different modules should be carried out in successive meetings over several days or spread across several weeks, according to the availability and dedication of the participants. Take enough time, but avoid a lengthy process which may increase the risk of dropouts.
- Make sure the facilitation team includes both genders.
- Look for appropriate venues for the plenary meetings and the working groups with the possibility of displaying the posters (walls, boards).
- Each module specifies the materials you will need for the exercises with the participants. In addition, you may want to bring a camera, notebooks and whatever refreshments are necessary – lunch, snacks and drinks.

Getting started in the community

- At the first meeting, inform the participants of the purpose, the possible outcomes, the requirements, the duration and the methodology of the process. Make sure that the community leaders show their commitment and support of the process publicly.
- Prepare thoroughly in advance and present a list of keywords in the local language(s) to make sure participants understand the terminology.
- Explain the logic and linkage of the exercises (the PACDR pathway).
- As the main focus of PACDR is on climate change, it might be helpful to give a brief introduction to the basics of climate change at the start. A slightly longer introduction to the scientific basis of climate change and scenarios is given in module 5. Ideas on how to present climate change in a community setting can be found in Annex VI.

Conducting the participatory exercises

- Some of the concepts might be difficult, so make sure the participants understand the questions they are asked.
- Try to strike a good balance between ensuring accuracy, necessary criticism and respecting the timetable without unduly influencing the results of the analysis.
- Make sure that the contributions of women, men and minorities are considered and monitored systematically and consistently throughout the application of the tool.
- Summarize and recall the results at the end of each exercise. Make sure to document the results – you may want to use the templates in Annex III to guide the note takers.
- Be careful not to raise unrealistic expectations with the assessment. Tell the participants exactly what you are doing and why you are doing it. Be thankful for their time and effort.
- Ask for permission to take photos.
- Leave the posters in the community. They are the owners.
- Consider inviting participants for discussion on follow-up activities as representatives of their community, district, etc.

Documentation of the results of the PACDR process is key to using the identified knowledge and information for further community action. After each exercise, note takers should summarize and document the results.

Reporting templates that cover the key aspects of each exercise and help note takers to produce conclusive exercise reports for the community as well as for the facilitation team and supporting organizations (NGOs, government services, etc.) are available to download at: www.pacdr.net/how-to-use-the-tool

Direct link to the Word document: https://pacdr.net/wp-content/uploads/2020/07/PACDR_Templates-for-note-taking.docx

A final PACDR report for the community should be produced based on the exercise reports. This document will deepen community ownership and help to organize and monitor community actions. It can also be used for advocacy purposes, project proposal writing, inspiring other communities, and raising awareness.

The intended purposes for the report determine the report language(s). The content of the final report should consist of the following elements:

1. **General information (community, participants, facilitation team, venue, date or period...)**
2. **Assessment of risks (hazards, vulnerable livelihood resources, local responses)**
3. **Current responses and additional adaptation options**
4. **Planned actions, key stakeholders and support**

As a minimum final report, the exercise reports can be collated and an introduction page plus title page added at the beginning. The introduction page should contain general information about the setting of the PACDR analysis: when did it take place, how was it initiated, who facilitated it, who participated, what will the results of the analysis be used for, who is the owner of the results and the report. The background information compiled in Module 1 should also be added to the final report, if it is available.

Exercise 4: Preparation of the seasonal calendar

The following list contains examples of events that can be taken into account when creating the seasonal calendar. The main input must come from the community, but the facilitators should ask probing questions in order not to forget important periods in community life.

Characteristics: Periodic events, activities, hazards, challenges (seasonality)

Items

Climate:

- Rainy seasons, dry seasons
- Heatwaves, heavy rains, thunderstorms, hurricanes, strong winds, sandstorms, frost, hailstorms, storm surges
- Flooding, droughts, uprooting
- Landslides, mudslides, rock fall, erosion, silting, sanding

Ecology:

- Wildfires, bush fires
- Slash and burn activities

Economic:

- Major crops (clearing, burning, sowing, weeding, harvest)
- Livestock
- Other crops (fruit trees, mushrooms...)
- Epidemics, diseases, pests
- Cash activities (hunting, firewood, charcoal, fishery, petty trade, brick making, gold digging)
- Labour migration

Food and water situation:

- Food shortage, hunger
- Water scarcity, water pollution, salinization

Financial situation, cash needs:

- School fees, holiday expenses
- Taxes
- Subsidies, government grants, aid

Social, cultural, political:

- Festivals, holidays
- Weddings, funerals, initiations
- Conflicts (land, elections, ethnic, religious)
- Domestic violence
- Theft, damage, looting

Personal, human:

- Epidemics, diseases
- Alcohol drinking
- Suicide

Exercise 5

Hazard impact matrix: Examples for livelihood resources

For the preparation of the vulnerability matrix, livelihood assets of the community are listed according to five different categories. As it has sometimes proven difficult for the participants to comprehensively list items belonging to the various categories, we have assembled a list of most common items. The main information has to come from the community, but the list can be used by the facilitator to ask probing questions.

Category	Example of resources
1. Natural resources <i>(around us without human efforts)</i> <i>Rely on directly (for food, income, medicine) or indirectly (protection from storms)</i>	<ul style="list-style-type: none">• Arable land, soil• Grassland• Water• Air• Biodiversity• Forest: Fuel, building, food, medicine• Wild plants and animals• Peat• Wetland systems• Sand, gravel, rocks• Sea coral reefs• Mangrove forests• Tidal flats
2. Physical resources <i>(created by human work and efforts)</i> <i>Basic infrastructure and productive capital for transport, buildings, water management, energy and communication</i>	<ul style="list-style-type: none">• Houses, stables and sheds• Agricultural implements and equipment• Ponds, harvesting systems• Bridges, roads, airports, harbours• Schools, hospitals• Communication facilities• Energy supply• Boats, ferries• Cars, trucks, motorcycles, bicycles, rickshaws• Computers, office equipment• Waste disposal systems• Water pumps, tanks, wells• Water delivery and sanitation systems

Category	Example of resources
<p>3. Economic and financial resources (<i>human activities and capital to generate income</i>)</p> <p><i>Activities, stocks and flows of money that allow people to achieve their livelihood needs and objectives</i></p>	<ul style="list-style-type: none"> • Income generating activities: Agriculture, husbandry, fishery, trade, business, ... • Access to markets • Liquid assets (livestock, stocks, etc.) • Cash and savings, jewelry • Loans • Credit systems • Pensions • Remittances • Insurance
<p>4. Social resources (<i>human relationships, affiliations, organization, groups</i>)</p> <p><i>Formal and informal of social relationships + institutions from which people draw in pursuit of their livelihood</i></p>	<p><i>Social attitudes and practices:</i></p> <ul style="list-style-type: none"> • Participation, democracy, solidarity, mutuality, awareness, conflict resolution skills, safety, communication, respect of laws, influence <p><i>Social structures:</i></p> <ul style="list-style-type: none"> • Local CSOs • Savings and solidarity groups • Human rights groups • Disaster preparedness committees • Networks • Local, regional and national governance institutions • NGOs (local, regional, international) • Informal groups • Women’s and men’s groups • Religious groups, church groups • Trade associations • Unions, federations • Parties, political organizations
<p>5. Personal resources (<i>individual resources</i>)</p> <p><i>Skills, knowledge, capacities and good health important to the pursuit of livelihoods</i></p>	<ul style="list-style-type: none"> • Health (physical, mental) • Skills: agricultural, veterinary, crafts, water management, health care etc. • Attitude, commitment • Values and virtues • Faith • Human rights • Affiliation, membership, influence

Conflict sensitivity analysis (Module 2 – Climate change and hazard analysis)

This annex provides links to other tools that can be used to complement PACDR and a quick guide for decision-making on whether or not to use them.

What can it be used for? In some contexts the hazard analysis of the PACDR can reveal that there are severe underlying conflicts in the community that could hinder the success of any climate-related project or community activities or that could be made worse during such a project. In such a case, an additional conflict sensitivity analysis helps to address these tensions in a systematic manner.

How does it work? The Helvetas/Swisspeace manual on working in fragile and conflict-affected contexts uses mainly participatory exercises. Step 1 includes three main exercises: (1) an actors' mapping and (2) an analysis of the positive and negative factors in the community that divide different groups, including men and women, or bring them together (e.g. values, institutions, common experiences or traditions). This is complemented by (3) an analysis of governance problems. The results can inform the development of conflict-sensitive adaptation options in the PACDR. In highly fragile or conflict-ridden contexts a full conflict analysis as described in the manual is recommended.

How long does it take? The three exercises of step 1 in the tool take about 4 hours.

Source: https://www.helvetas.org/Publications-PDFs/2013_hsi_manual_3_steps_wfcs.pdf

Participatory Vulnerability Analysis (Module 3 – Hazard impact assessment)

What can it be used for? The Participatory Vulnerability Analysis (PVA) tool developed by Action Aid enables you to do an additional vulnerability assessment of vulnerable people or groups. The PACDR analyses the vulnerability of the community in general and of different livelihood resources. It also looks at gender dimensions of vulnerability and touches on issues of minorities, but not at differences within these groups. The PVA tool provides a detailed analysis of who the most vulnerable are within a community beyond gender and minorities, what they are vulnerable to and what the underlying causes of vulnerabilities are.

How does it work? The vulnerability analysis in the PVA tool draws on exercises similar to the PACDR (e.g. hazard map and seasonal calendar) but adds some specific guiding questions on vulnerability. In addition, it includes further exercises (problem tree and concept mapping) which focus more concretely on vulnerability. It also gives guidance on which aspects of vulnerability should be discussed and documented. The PVA also includes steps to carry the results from the analysis to the district and national levels to create ownership and develop advocacy strategies.

How long does it take? A full PVA community analysis takes about 3–4 days. Conducting only the additional exercises will take about 3–4 hours.

Source: https://www.svri.org/sites/default/files/attachments/2016-01-13/108_1_participatory_vulnerability_analysis_guide.pdf

Using games to enhance understanding of climate change and its impact (Module 3 – Hazard impact assessment)

Game 1: The Greenhouse Gas Game

What can it be used for? The Greenhouse Gas Game can be used in settings where it is important to create a basic understanding of the greenhouse effect. It creates a basis for understanding how global warming and climate change can increase this effect and exacerbate hazards and impacts across the world.

How does it work? The Greenhouse Gas Game is a physical game in which participants simulate the greenhouse effect. Each participant becomes either heat from the sun or a greenhouse gas and they simulate the entry of sun rays into the atmosphere and the trapping of the heat by greenhouse gases. The game needs an experienced facilitator. It is suitable for youth and adults, but not for settings where touching is inappropriate. To play you need a large space where 30 people can run around.

How long does it take? The game takes about 20 minutes.

Source: <https://www.climatecentre.org/downloads/modules/games/Greenhouse%20Gas%20Game.pdf>

Game 2: Paying for Predictions

What can it be used for? Playing the game Paying for Predictions helps participants understand the potential value of forecasts and helps break down some of the barriers preventing investment. The game emphasizes the concept of climate-based disaster risk reduction and can serve as a training in decision-making under high uncertainty.

How does it work? Paying for Predictions is a dice game that deals with forecast-based flood preparedness and constantly changing risk. Players play individually and in teams and decide whether to invest in preparing for a disaster or not. The game simulates the process of individual and collective decision-making in the context of uncertainty. The game needs a highly experienced facilitator and participants who are able to deal with uncertainty and confusion during the game. It can be played with 6 to 100 players in a room with tables and chairs.

How long does it take? The game takes about 45–60 minutes.

Source: <https://www.climatecentre.org/downloads/modules/games/Paying%20for%20Predictions.pdf>

Facilitating a community planning process at the household level with a Gender Action and Learning System (Module 6 – Community action planning)

What can it be used for? The Gender Action Learning System (GALS) is a community-led empowerment methodology that aims to give women and men more control over their lives and catalyse community action. It develops visions and corresponding activities on a household level, and can be useful for transforming insights from the PACDR analysis on gender effects into action. GALS is not a one-off activity, but is part of a long-term accompaniment of community activities with a particular focus on enhancing gender relations.

How does it work? GALS starts with a Change Catalyst Workshop to initiate the gender process with community champions and project staff. The workshop is facilitated by a lead expert on GALS and introduces three key tools: the Vision Journey, the Gender Balance Tree and the Empowerment Leadership Map. Over the months after the workshop, communities are accompanied by the lead expert. A Community Action Learning process aims at supporting reflective learning and individual and collective strategies to improve progress. Individuals, groups and organizations track and share their individual and collective progress based on the three tools. This is complemented by periodic Participatory Gender Reviews that help deepen gender transformation and address issues arising from the process. The review visits also provide a focus on qualitative analysis of the information from the Community Action Learning and progressive adjustment of the monitoring and evaluation systems.

How long does it take? The Change Catalyst Workshop takes 3–5 days. The ensuing process takes months to years.

Source: [https://www.oxfamnovib.nl/redactie/Downloads/English/SPEF/140701_RRDD_manual_July_small\(1\).pdf](https://www.oxfamnovib.nl/redactie/Downloads/English/SPEF/140701_RRDD_manual_July_small(1).pdf)

Simple Greenhouse Gas Assessment for Communities (Module 4 – Identification and assessment of risk reduction options)

What can it be used for? This assessment intends to raise awareness about existing sinks and sources of greenhouse gases in the context of the participants' daily lives. The analysis is simple and can help participants to become more aware of positive and negative impacts of existing practices and proposed adaptation strategies on greenhouse gas emissions. This can in turn empower communities to act on climate change (reduce GHG emissions) or to actively promote their contribution as guardians of carbon sinks (e.g. community conservation activities).

How does it work? The participants establish a list of common daily activities, livelihood and income-generating activities, as well as relevant ecosystems and natural resources managed by the community. For each listed item, the group identifies the impact on climate change: positive (reducing emissions or protecting sinks), neutral (no effect on carbon emissions or sinks), or negative (increasing emissions or reducing carbon sinks). For activities with negative effect, participants discuss whether alternative strategies exist and are feasible.

How long does it take? The assessment takes 1–2 hours.

Source: https://pacdr.net/wp-content/uploads/2018/11/PACDR_English_Ver7_2017-2.pdf

A. Greenhouse gas effect basics

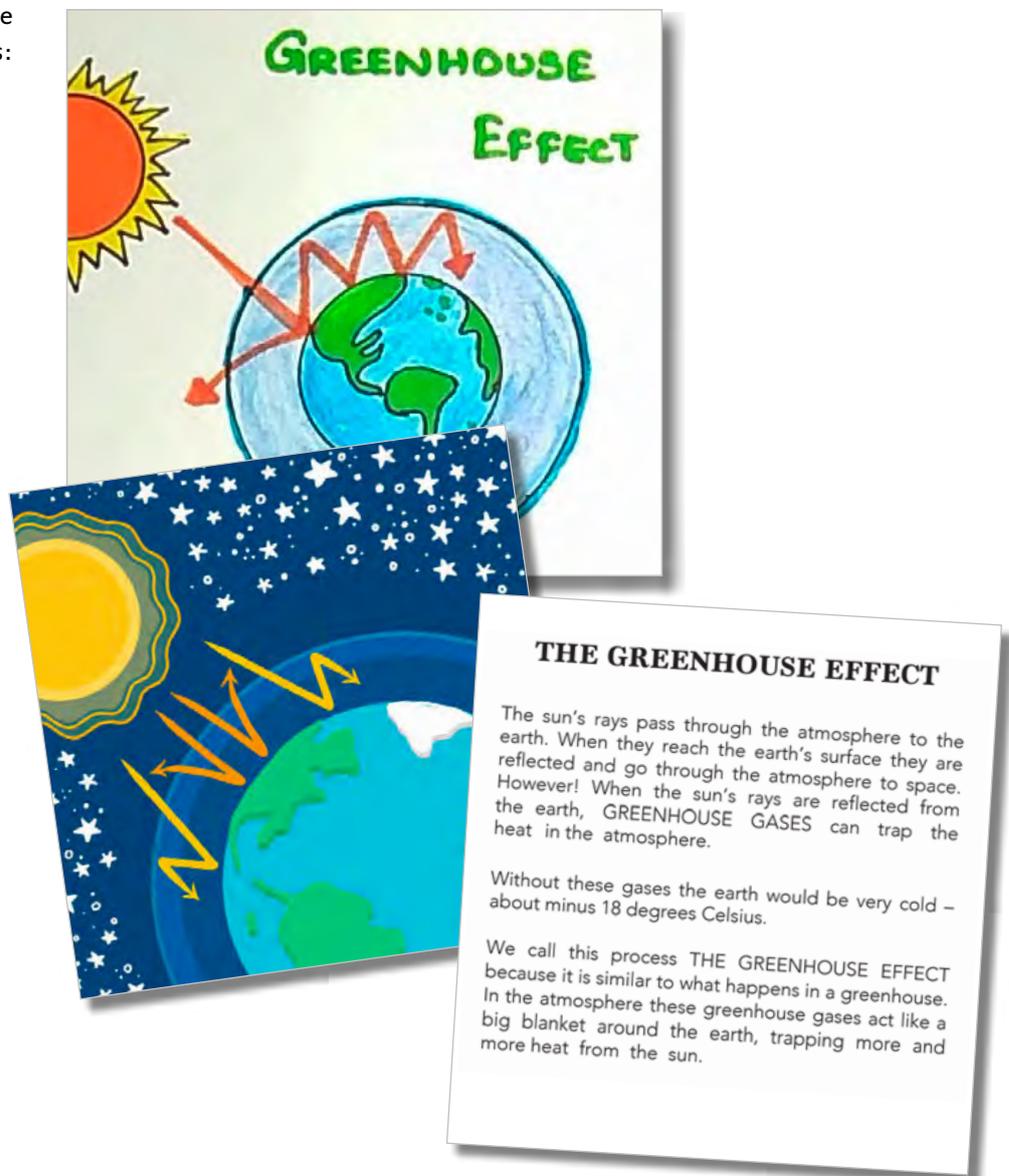
For greenhouse gas effects basics, you could also consider playing the greenhouse gas game (see Annex V), depending on the suitability for the participants and the time available.

Here you find an instruction on how to draw a very simple picture of the greenhouse effect:

<https://www.youtube.com/watch?v=xvAHRb0KFQA>

(video duration: 84 seconds)

At the end, the picture looks like this:



B. CO₂ Sources as the cause of climate change

It is ideal to use local pictures and examples to be context specific. You can get some inspiration from these general examples.

Source of Material:

<https://www.climatecentre.org/downloads/modules/games/Debrief%20Climate%20Cards%20GHG-1-10.pdf>

CAUSES

HUMAN ACTIVITIES contribute to having more greenhouse gases in the atmosphere.

What do you think the biggest causes are?

Category	Relative Contribution (Estimated)
Electricity from coal or diesel generators	High
Industry or pollution from factories	Medium-High
Cutting trees releases their carbon dioxide	Medium
Agricultural practices (rice paddies, cows)	Medium-Low
Transport methods (cars, trucks, trains)	Low-Medium
Buildings	Low

The major greenhouse gases are:

1. - Carbon dioxide
2. - Methane
3. - Nitrous oxide
4. - Fluorinated gases
5. - Water vapour

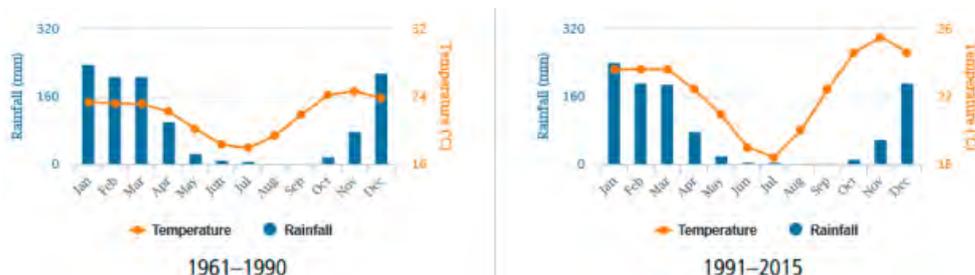


Source:

https://ars.els-cdn.com/content/image/1-s2.0-S016788091730244X-fx1_lrg.jpg

C. Local weather and climate records

In Module 1, you searched for local weather and climate data. If you found suitable graphs (e.g. from the World Bank climate portal), you may want to print two graphs on posters to compare historical and recent climate data next to each other. Relate the scientific observations to the local observations made in modules 2–4 of the PACDR assessment.



D. Impacts of climate change beyond the community

We suggest that you start with impacts already familiar to the community (e.g., sea level rise if the community is affected by that), followed by impacts that the community can relate to (e.g., floods and impacts caused by heavy rainfall). Last, you can show those impacts that are different from those the community experiences, and maybe harder to grasp (e.g., forest fires caused by heat and drought).

You can use photos

(<https://climatevisuals.org/images?f%5B0%5D=collections%3AClimate%20Impacts>)
and/or testimonials

(e.g. <https://www.trocaire.org/whatwedo/climate-justice/stories> or <https://facingclimatechange.net/>)

to show different impacts.

E. Climate change scenarios

When presenting the climate change scenarios, it is good to link the global scenarios to possible local scenarios. While it is often possible to find global or continental predictions for changes in climate, it is more difficult to find national or local material. As a basic assumption you can work with the observed changes locally and discuss that it is likely they will continue further in the future.

F. Climate politics

Climate politics might seem far removed from community realities, but national up to global climate politics might have direct impacts for communities. When preparing for or during the PACDR process, you may have become aware of climate mitigation projects conducted in or nearby the community. Some of these projects, such as bioenergy, REDD+-projects or large dams, potentially cause negative impacts for the community. If the community is or may become affected by such projects, it is important to build the communities' capacities to make informed choices and participate in local politics. On the other hand, some national climate policies might offer access to resources for adaptation and resilience building or energy access to communities. These might be important sources to tap when conducting the community planning.

Community workshops using the PACDR tool have been and are being conducted in many countries around the world. The impacts of the workshops at household and community level are as varied as the places and livelihood conditions in which the workshops are conducted. However, the aim is always to improve the (climate) resilience of households and communities.

In order to encourage communities at the very beginning of the PACDR process and to show them its usefulness, it might be an inspiring thing to talk about positive changes that have been made possible with the PACDR tool. Here is a success story from DR Congo.

Idjwi Island, with its 300 km², is located in Lake Kivu in the very east of the DR Congo.

The challenges on this island are numerous:

- It is heavily populated (over 1,000 inhabitants/km²),
- almost all the forest that once covered the island has been cleared for fields and settlements,
- the tradition of burning fields is widespread,
- due to the hilly, steep relief, it is highly exposed to erosion,
- climate change is manifested by erratic rainfall, increased temperatures and frequent destructive thunderstorms,
- these lead to loss of crop yields, damaged or destroyed houses, the impairment of fishing and the rise of diseases.



Erosion of fertile soil reduces crop yields and leads to landslides.

A five days PACDR training workshop for the staff of CPR-Idjwi, a local NGO and long-time partner of Bread for the World, Germany (BftW), was conducted in a community in the northern part of the island. Soon after the training, CPR organized two PACDR multi-stakeholder workshops for 4 days on district level (several communities) with 50 participants (farmers, fisherfolk, traders, NGO staff, civil society, local government authorities, church leaders, district administration, environmental agency, agricultural agency, large landowners, farmers' organizations, coffee cooperatives, and businesspeople). The aim was to develop district climate change adaptation plans to better cope with hazards and harmful impacts and to enhance preventive capacities.

Some **practical outcomes** of the PACDR workshops:

- A 5 years-**Community Adaptation Plan** focusing on improving of agriculture, fisheries, water supply and infrastructure.
- New **local rules & regulations** (prohibition and sanctioning of bushfires/field burning, planting trees only with indigenous species (interdiction of planting eucalyptus trees), erosion control measures for households, water conservation measures, etc.).
- **Information, lobbying and advocacy** actions at different levels: Provincial government, farmers' organisations, rural broadcasting, public statements, church pronouncements.
- Increased **cooperation** between local NGOs, communities, local government authorities and research.
- Incorporation of climate change issues in **school curricula** (primary, secondary and vocational schools).
- Development of **project proposals** based on PACDR data in the areas of erosion control, afforestation, renewable energy, resilient crop varieties, and on-farm research. Several project proposals have since been funded by UNDP, FAO, BftW, UNICEF and embassies.
- National and international **networking** and **cooperation** for knowledge sharing, publication of research results, mutual visits, joint actions, etc.
- CPR appointed a staff member as **climate focal point** with specific climate change related tasks.
- **Young entrepreneur groups** offered their services to farmers to dig trenches and contour lines and to plant trees, shrubs and grasses.
- **Agriculture** and **seed fairs** where farmers display and share their products.

Something very special was the signing of a "**self-commitment**" by the participants of the workshops, in which they committed themselves to personal activities such as erosion control, planting trees or soil conservation.

The following skills and activities of CPR were crucial to the success of the PACDR process:

- Dedicated and informed **management and staff**
- Involvement of **all stakeholders** in the PACDR process, from the preparation and implementation of the workshops to the implementation of the planned measures (high ownership)
- Regular contacts and cooperation of CPR with the **local government** (invitations to information events, field visits, meetings, informal talks)
- Fundraising, public relations and media relation **skills**
- Regular and transparent **monitoring and reporting** by CPR and other stakeholders
- Active interest in **innovation** and field research
- Patience and **perseverance**, especially in the face of setbacks, failures and defeats

Climate change adaptation and disaster risk reduction measures must be site-specific and supported by the community and local authorities in order to sustainably increase the resilience of households and the community. As the impacts of climate change are likely to worsen in the coming years, further appropriate adaptation measures need to be developed. PACDR is an ongoing process.



A UNDP-funded project on terracing has temporarily created jobs.



Erosion control and improvement of soil fertility through contour farming, terracing and agroforestry.

