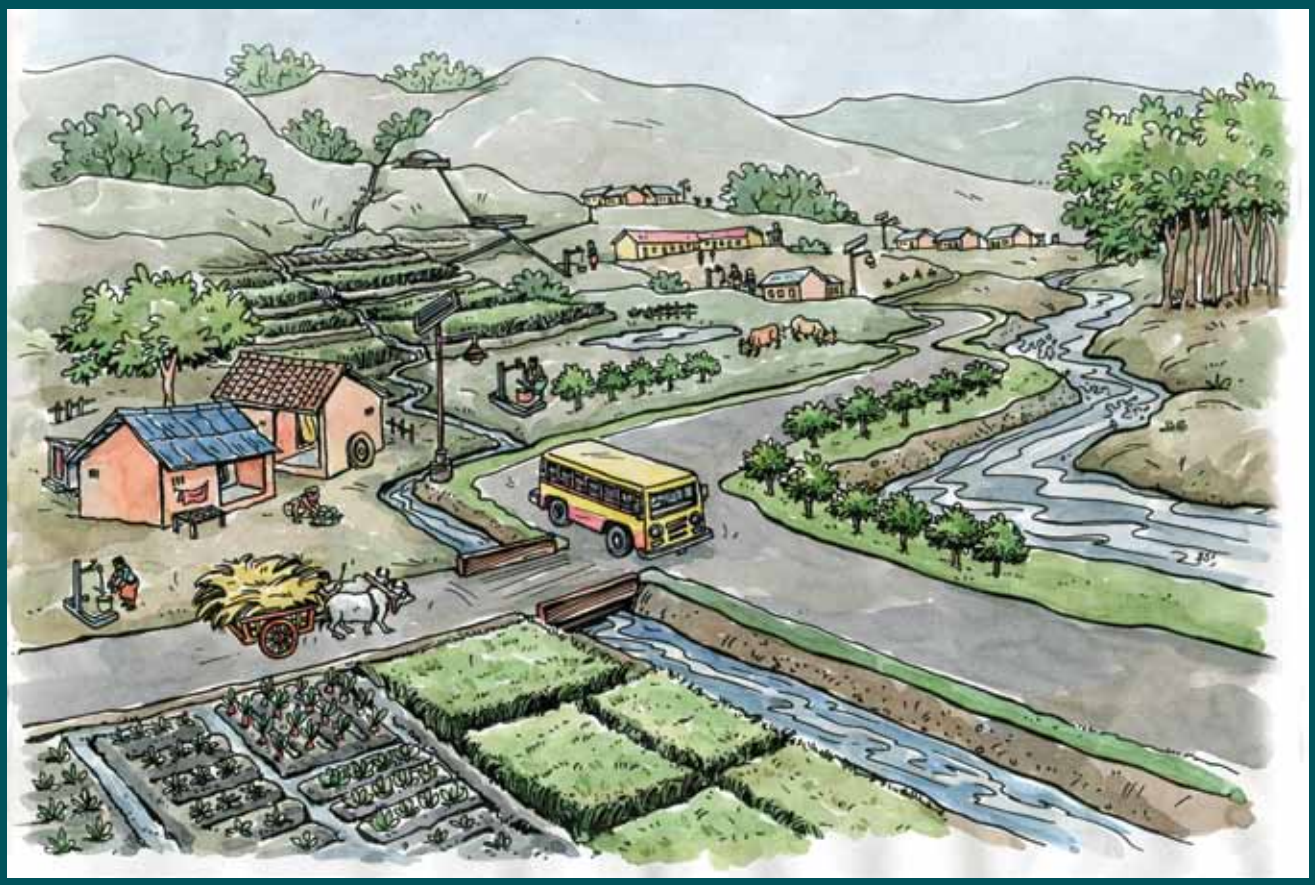
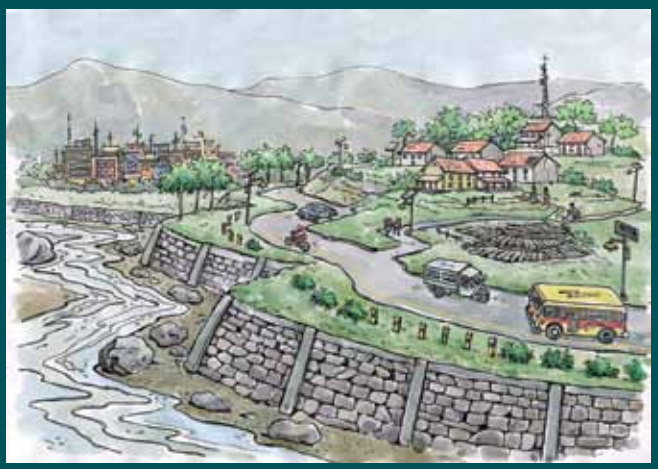
HARIYO BAN PROGRAM

VULNERABILITY ASSESSMENT AND ADAPTATION PLANNING

TRAINING OF TRAINERS MANUAL





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2014

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Foreword

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Increasing climatic variability and extreme and unpredictable weather events have added challenges to the communities of developing countries through increased climatic hazards and risks in development interventions. Past studies have revealed that atmospheric temperatures are rising as a result of increasing greenhouse gases emissions from human activities. The change of air temperature over time and space has varying troubling impacts.

The impact of climate change goes beyond specific sectors, geographic areas, ecosystems, and communities. Climate-induced hazards not only effect local development and infrastructure but also damage the assets that directly affect people's livelihoods. Immediate responses are needed to enhance the resilience of vulnerable communities and ecosystems.

In accordance with international commitments and national developmental needs, Nepal has endorsed the Climate Change Policy, the National Adaptation Programme of Action (NAPA), and the National Framework on Local Adaptation Plans for Action (LAPA) to support communities in adapting to the impacts of climate change.

Climate change does have many different impacts and, therefore, increasingly undermines development interventions. To effectively implement adaptation actions, it is essential to strengthen the capacity of the delivery agencies, including those of the professional trainers engaged in capacity building at the district and regional levels. This manual will help guide the training of trainers to effectively conduct the training programs on climate adaptation at different levels.

This manual, developed with support from USAID Nepal, will, I believe, be an instrument with which to implement climate adaptation programs with mitigation benefits. The manual provides an overview of climate change concepts, dynamics, impacts, and responses that are understood at different scales. The manual provides ways to integrate adaptation programs at the policy, process, and action levels. It also presents indicators to track changes in the community and ecosystems that are taking place as a result of intervention.

I would like to thank the study team, workshop participants, and numerous individuals who made valuable contributions throughout the development of this manual. I hope that this manual can provide a roadmap for the capacity building of delivery agents – a prerequisite for the effective and timely delivery of adaptation services.

Krishna Prasad Acharya
Cheif,
Planning Division

Preface

Nepal has several sites that are critical to the preservation of its biodiversity and the fine balance of its fragile environment. Many of these areas are also important to human communities that are heavily dependent on nature and its resources for their livelihoods. Unfortunately, both environmental and anthropogenic threats to ecosystems and human communities are on the rise. Increased climatic variability and extreme and unpredictable weather resulting from climate change are having numerous impacts on the lives of poor, vulnerable, and socially excluded groups. Such threats are undermining development and conservation efforts.

CARE Nepal works closely with government ministries and departments and several other development partners through various community development projects and programs. These efforts are guided by government priorities, CARE's global programming principles, and the needs of local communities. Our work aims to enhance the resilience of vulnerable ecosystems and communities throughout Nepal. The Hariyo Ban Program, funded by USAID and implemented by a consortium of four partners (WWF Nepal, CARE Nepal, FECOFUN and NTNC) is working to reduce the adverse impacts of climate change in Nepal's Terai Arc Landscape and Chitwan Annapurna Landscape.

The climate change adaptation component of the Hariyo Ban Program works to increase the ability of targeted human and ecological communities to adapt to the adverse impacts of climate change. We believe that an important part of this involves enhancing facilitators' knowledge and skills around tools and techniques of vulnerability assessment and adaptation planning. This manual provides a practical step-by-step guide for people and agencies engaged in local development and climate change adaptation. We expect the manual to be especially useful for assessment of integrated vulnerabilities of both ecosystems and human communities, identification of essential adaptation options and implementation of plans to effectively respond to threats and vulnerabilities.

I would like to thank my fellow colleagues and those institutions that have been involved in preparing this manual, including our Hariyo Ban Program consortium partners. I would also like to extend sincere thanks to the Government of Nepal for all the support and feedback made available to us over the course of implementing programs. Finally, I would like to thank USAID for funding the development of this manual through the Hariyo Ban Program.

Dilip Niroula
Acting Country Director
CARE Nepal

Acknowledgments

As climate change advances and climate variability increases, it is important to take action to build resilience and facilitate climate adaptation for people and natural systems. Capacity building of key national and local stakeholders – communities, natural resource management groups, government institutions, civil society organizations, academic institutions, and media – is a key part of climate change adaptation. Capacity building for climate adaptation needs to focus on developing scientific understanding of climate change and variability, climate vulnerability assessment and adaptation planning. The role of science-based information is crucial in communicating climate change adaptation. Capacity may be built through formal training, workshops, exposure visits, awareness campaigns, and media outreach. This practical guide focuses on helping increase the knowledge and skills of field technicians and community workers in this relatively new theme through a training of trainers approach. The new knowledge and skills in the two target groups will be valuable for trainers in preparing, implementing, and monitoring gender equitable and socially inclusive adaptation plans.

This manual is the result of concerted efforts by a technical team, and has been revised on the basis of lessons learned during adaptation planning workshops at community, district, and national levels, and through CARE and WWF global learning from climate adaptation and mitigation programs. The modules also acknowledge and draw on resources produced through Nepal's National Adaptation Programme of Action, National Framework on Local Adaptation Plans for Action, and LAPA Manual, as well as the Government of Nepal's guidelines on gender and social inclusion; and the Monitoring and Evaluation Framework and Minimum Conditions Performance Measurement of the Ministry of Federal Affairs and Local Development.

This manual was prepared by Dr. Sunil Kumar Regmi and Dr. Deepak Rijal. Some of the training material is drawn from an extensive training curriculum on Integrated Climate Vulnerability Analysis and Local Adaptation Planning that was prepared for the Hariyo Ban Program by Tine Rossing, Global Climate Adaptation Coordinator from CARE PECCN. I highly appreciate the authors work in transforming complex scientific information into simple language and refining the format of the training of trainers manual. I also appreciate the Hariyo Ban Program team members including Sandesh S. Hamal, Sikha Shrestha, Aarjan Dixit, Dr. Shant Raj Jnawali, Keshav Khanal, Dev Raj Gautam, Pratima Shrestha, Man Bahadur Biswokarma, Umesh Shrestha, Pabitra Jha, Sanjay Pariyar, Prajwal Baral (Adaptation Group of Nepal, Lalitpur), Sudip Pradhan (ICIMOD) and Saurav Shrestha for their critical contributions, review, and suggestions at various stages. Thanks also to Ayusha Nirola, Khim Giri, and Richa Bhattarai for their support in administrative and contractual processes.

Finally, this manual would not have been possible without the generous support of the American people through the United States Agency for International Development. I would like to give my heartfelt thanks to Netra Sharma, USAID Nepal's Agreement Officer's Representative for the Hariyo Ban Program, for his encouragement and support in producing this manual. We hope it will play a significant role in promoting gender sensitive and socially inclusive climate adaptation for the benefit of people and ecosystems in Nepal.

Judy Oglethorpe
Chief of Party
Hariyo Ban Program

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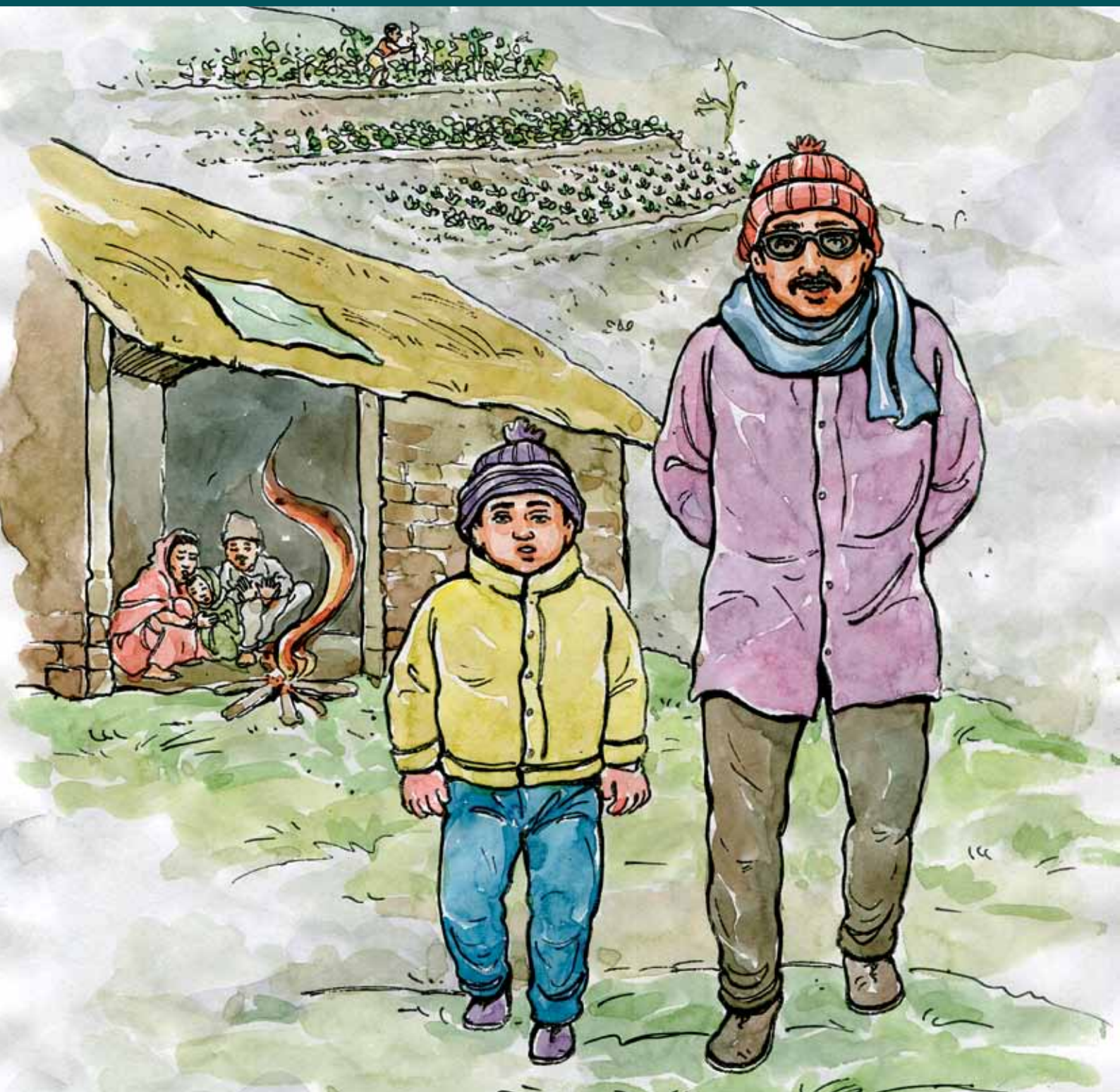
CHAPTER I



BACKGROUND

Industrial growth combined with increasing use of fossil fuels, deforestation and forest degradation, rising use of agro-chemicals, and overexploitation of natural resources has led to a rise in greenhouse gas emissions. As a result, changes in atmospheric temperature have been measured that vary over space and season. Changing patterns have been observed in the timing, intensity, and form of precipitation. These patterns have increased not only climatic variability but also uncertainty.

Climate change impacts are manifold and cross-cutting. In any extreme climatic events, water availability is directly affected along with impacts on other sectors. Climate-induced extreme events directly can affect the maintenance and utilization of natural resources, physical structures, and natural and social capital. Nepal has witnessed its share of worrying climatic changes. The diverse and fragile land forms, farming practices, landscapes, and distribution of natural resources have made communities more vulnerable.

To address these needs, it is essential to build the capacity of key stakeholders at the local, district, and regional levels. Strengthening the capacity of the stakeholders is essential for the implementation of adaptation action. For this, it was long felt to have a structured training manual. This training manual guides trainers to effectively conduct training programs for stakeholders at the district level or below. It contains basic resources that will help trainers facilitate training without external support.

This manual has been designed for officials of the Government of Nepal, representatives of civil society and other organizations engaged in climate adaptation planning. The manual is designed to align with the guidelines and tools recommended for the Training of Trainers on climate change, vulnerability assessment and adaptation planning. Cross-cutting issues like livelihoods, gender equality and social inclusion (GESI), and governance have been given due importance in this training manual.

This manual provides a step-by-step guide for the people engaged in local development, and adaptation planning. Six different training modules have been designed to identify the climate change vulnerabilities that communities and ecosystems will likely face and how to prepare for and respond to them.

PURPOSE

This manual is intended to build a common understanding among stakeholders of climate vulnerability assessment and adaptation planning being prepared at different levels. It consolidates methodologies and tools as envisioned by the Ministry of Science, Technology and Environment in its Local Adaptation Plans for Action (LAPA) Framework and LAPA Manual.

The specific objectives are to:

1. Meet the demand for improving skills in climate change adaptation programs among officials of the Government of Nepal, related projects and other service providers.
2. Build a pool of trainers for further training across landscapes and eco-development regions in line with broader frameworks endorsed by the Government of Nepal and those developed through other agencies.
3. Strengthen capacity of different stakeholders operating at local, regional and national levels in designing and implementing climate adaptation programs.
4. Sensitize participants to conduct participatory, gender responsive and socially inclusive adaptation planning.
5. Strengthen institutional capacity to mainstream climate adaptation processes into the national governance system.

WHO IS THIS GUIDE FOR?

The audience may include government officials; people directly engaged in adaptation, and local development; and those who will become master trainers and planning facilitators. The manual assumes that readers will already have skills in facilitating training; therefore, there is no separate module designed for training facilitation skills, but some materials are provided.

HOW WAS THE MANUAL DEVELOPED?

This manual and modules were piloted in training courses and followed up with field tests. Two four-days training of trainers workshops were organized, one in Pokhara and the other in Nepalgunj, Nepal in 2012. In both workshops, the same methods were followed: three days of classroom training and one day of community field visit. The two workshops were attended by a total of 70 participants comprising government officials and staff from Hariyo Ban Program consortium members: CARE Nepal, WWF Nepal, the Federation of Community Forestry Users Groups Nepal (FECOFUN) and the National Trust for Nature Conservation (NTNC). A few representatives were invited from Local Initiatives for Biodiversity Research and Development (LIBIRD) and CARE's Churia Livelihood Improvement (CHULI) Project.

This manual is the result of concerted efforts made by the team. It has been revised on the basis of lessons learned during the workshops and CARE's global learning on climate adaptation programs. The modules acknowledge and refer to the resources produced through Nepal's National Adaptation Programme of Action, National Framework on Local Adaptation Plans for Action, LAPA Manual, and the Government of Nepal's guidelines on gender equality and social inclusion. It also draws on the Monitoring and Evaluation Framework and Minimum Conditions Performance Measurement of the Ministry of Federal Affairs and Local Development.

HOW CAN THE MANUAL BE USED?

Each training module provides session plans, presentations and handouts. It is important to tailor training sessions to the specific audience, learning objectives and local context as needed. This may include adding complementary presentations or activities so that the group can go deeper into issues, or leaving out some of the suggested activities. In response to the needs and time of the program and the resources available, the facilitator may need to adjust the activities for some module sessions. It is important to be flexible in timing in case of unexpected issues, such as translation or interpretation if participants wish to discuss in their preferred languages. At times, a field component will be involved and this will require additional planning and preparation. The facilitator will need to allocate sufficient time for critical reflection and learning while delivering this training.

Another key step in the development of any training program is defining the learning objectives. Doing so will provide guidance in choosing training objectives, selecting training modules, and allotting the right amount of time for sessions. A training session with 25–30 participants has proved to be effective, and deviating too much from this range will have trade-offs in either effectiveness or efficiency.

TRAINING MODULES

Suggested training modules, topics and indicative time required are presented below.

Module	Topic	Time
Module 0 – Introduction to Training of Trainers Workshop		
Session 0	Introduction to the workshop	30 minutes
Module 1 – Understanding Climate Change		
Session 1	Climate change, causes and Nepal's context	45 minutes
Module 2 – Climate Change Impacts		
Session 2.1	Introduction to climate change impacts	15 minutes
Session 2.2	Climate change impacts on ecosystems and their services	45 minutes
Session 2.3	Climate change impacts across NAPA thematic areas: agriculture and food security, forests and biodiversity, water and energy, urban areas and infrastructure, public health, and climate-induced disasters	2 hours
Session 2.4	Climate change impacts on communities and people	45 minutes
Session 2.5	Climate change impacts on people of different ethnicity, gender, age and regions	45 minutes
Module 3 – Integrated Climate Vulnerability Assessment and Adaptation Planning		
Session 3.1	Methodology and process for climate vulnerability assessment and adaptation planning	2 hours 30 minutes
Session 3.2	From vulnerability to adaptation through strengthening adaptation initiatives	1 hour 45 minutes
Session 3.3	Field exercise on community vulnerability assessment and adaptation planning	6 hours (field)
Session 3.4	Synthesis, processing and analysis of field exercise, outcomes and debriefing to the community	1 hour 30 minutes
Module 4 – Understanding Community Visioning		
Session 4.1	Community visioning for high adaptive capacity and climate resilience	1 hour 30 minutes
Session 4.2	Synthesis, processing, and analysis of community visioning outcomes	45 minutes
Module 5 – Understanding Participatory Scenario Planning		
Session 5.1	Climate change scenario development and scenario based planning	1 hour
Session 5.2	Prioritization and climate adaptation planning	2 hours 45 minutes
Module 6 – Understanding Integrated Planning and Local Planning Process		
Session 6.1	Local and sectoral planning processes	45 minutes
Session 6.2	Key areas for integration into local development and sectoral planning	2 hours

Module	Topic	Time
Session 6.3	Mainstreaming for climate adaptation	2 hours 30 minutes
Session 6.4	Participatory monitoring and evaluation	2 hours 45 minutes
TOTAL TIME		31 hours 30 minutes

PREPARING FOR THE TRAINING PROGRAM

The preparation and structuring of the modules are key to effective training. Trainers need to invest adequate time in planning and preparing to ensure an effective training program. Timelines are provided below to guide trainers in their preparation.[1]

Four to six weeks before

This is the initial planning stage. The trainers should begin communicating and discussing plans with the people who have asked for and are supporting this training program. The trainers should:

- Make sure they have identified persons to support the training session with respect to planning and logistics
- Agree on the date and duration of the training program, and target groups
- Consider candidates with respect to job function, existing knowledge language skills, and learning objectives
- Prepare a rationale outlining the content that will be enclosed with the invitation letters to participants
- Dispatch invitation letters and check if participants have received them

Three weeks before

- Confirm the training venue and make sure it has appropriate equipment and facilities
- Prepare agenda items:
  - Design your agenda around the objectives of the training session, keeping the needs, priorities, and existing knowledge of the target audience in mind.
  - Use a mix of methods, including presentations, hands-on activities, small group discussions, role play, word games, and plenary and brainstorming sessions.
  - Make sure adequate time is available for discussion and build in some flexibility. Trainers should put enough time aside to clarify and elaborate points that are raised but yet unclear, conduct question-and-answer sessions, and give participants the opportunity to discuss among themselves. Time is always limited and learning aspirations are many, therefore, trainers should prioritize the agenda for further discussion and elaboration.
- Communicate with invitee organizations for their feedback on the training module and technical content.
- Plan reasonable morning and afternoon breaks, lunch, and hi-tea to energize participants, encourage informal exchanges, and promote institutive and rational thinking.
- Engage outside experts in bringing fresh and recent knowledge into sessions. Deliberation by visiting practitioners also avoids monotony and training fatigue. Invite external experts – particularly those representing national institutions – to run sessions on the current climate context and future projections.

[1] This section was prepared based on a previous CARE training module by Angie Daze, PECCN/CARE International and Julie Webb, CARE Australia.

Two weeks before
Building on the draft agenda item, trainers should begin detailed planning.

- Confirm attendees so far and make sure these match with the targets. Follow up with those who have not yet confirmed.
- Finalize and send agenda along with any reading materials to participants in advance.
- Prepare training package with relevant information outlined in the program schedule.
- Tailor presentation materials, PowerPoint slides, activities, and handouts to the audience. Make sure to add photos and video clips as relevant with local context.
- Finalize the training venue and logistics including training materials and equipments.

One week before
At this point, all of the logistics should be organized and the participants confirmed. Participants can begin the final preparations.

- Review all of the training materials, including PowerPoint slides and handouts, to ensure that the exact content and activities for the session and homework are known.
- Print important materials or pass on e-copies to share with participants.
- Prepare back-up files of slides and handouts or send copies to an alternative e-mail account and dropbox to avoid losing your materials.

On the first day of the training session
A few things can be done in advance to ensure a positive training experience:

- Get to the venue early to make sure all materials are ready and all equipment is there and functioning.
- Consider the room set-up and how it will help or hinder collaboration between participants – rearrange if necessary. Prepare a team of trainers for a quick reshuffling.
- Confirm timing of breaks and lunch and ensure that refreshments are served according to the schedule.
- Put some energizers and boosters aside in case classroom energy drops. To re-energize the group, use these booster tips instead of the regular agenda item.
- Prepare to reward and recognize participants' contributions.

Throughout the training session
- Be approachable, responsive, and open. Encourage others to learn by having a good time.
- Avoid going over time at all costs – respect your participants' other commitments at work and at home. You will need to decide which discussions are important enough to go over time and which need to be politely cut off. Consider using a parking lot for these discussions, and return to them later only when there is enough time for discussion.
- Do daily check-ins with participants to ensure that the training is working for them, and do an evaluation at the end of the training.
- Be flexible. It is important to adjust the agenda daily to meet the needs and interests of participants.

FIELD VISIT

In order for training participants to practice what they are learning, particularly using participatory tools such as those recommended for the Climate Vulnerability and Capacity Analysis, LAPA Manual, Ecosystem Based Adaptation, and Community Based Adaptation, it can be useful to incorporate a field visit as part of the training. This is particularly useful for the teams that will directly interact with communities in analyzing vulnerability to climate change and prioritizing adaptation actions.

Planning is essential to ensure that the field visit is effective. Make sure that it will not cause an undue burden to community participants. While planning field visits, the following key aspects need to be kept in mind:

- Conduct training exercises with communities where some programs already exist. This eases planning and logistics, and places the exercise in the context of an on-going project or program. It can also help create trust as the participants will already be familiar with the program activities, project staff, and local communities.
- Plan field visits during earlier sessions so that these outcomes can be referred to while holding discussions in the following sessions.
- The trainers will need to obtain permission from community leaders to conduct field exercises.
- It is important to ensure field visit plans are realistic in terms of time and associated field actions.
- Community facilitators included in the team should be encouraged to moderate field exercises.
- Where possible, work with different social, ethnic, age, gender, and vulnerable groups to categorically assess and identify problems and perceptions (results) that can be compared and contrasted in the following discussions.
- Selection of the right facilitators and discussion venue is important. The facilitators should be chosen based on their compatibility with the communities. This will depend on the nature of the exercise – for example, women's groups might be better facilitated by women.
- Consider that the communities have their own priorities for the field exercises. Be respectful by getting their input on the timing of the process, being on time, working efficiently through the exercises, providing refreshments and child care if needed, and being grateful for their time.

TRAINING SCHEDULE

The following sections provide an example of how the training can be structured for 4 days.

<table>
<tr><th rowspan="2">Day</th><th colspan="5">Time</th></tr>
<tr><th>08:30–09:00</th><th>9:00–12:00</th><th>12:00–13:00</th><th>13:00–17:00</th><th>17:00–17:30</th></tr>
<tr><td>First day</td><td rowspan="5">Welcoming Tea</td><td>Session 0 – 30 mins
Session 1 – 45 mins
Session 2.1 – 15 mins
Session 2.2 – 45 mins</td><td rowspan="4">Lunch</td><td>Session 2.3 – 2 hours
Session 2.4 – 45 mins
Session 2.5 – 45 mins</td><td rowspan="4">Pre-briefing of Module 3</td></tr>
<tr><td>Second day</td><td>Session 3.1 – 2 hour 30 mins
Session 3.2 – 1 hour 45 mins</td><td colspan="2">Session 3.3 – 6 hours (Field Practice)</td></tr>
<tr><td>Third day</td><td>Session 3.4 – 1 hour 30 mins
Session 4.1 – 1 hour 30 mins</td><td rowspan="3">Lunch</td><td>Session 4.2 – 45 mins
Session 5.1 – 1 hour
Session 5.2 – 2 hours 45 mins</td></tr>
<tr><td>Fourth day</td><td>Session 6.1 – 45 mins
Session 6.2 – 2 hours</td><td>Session 6.3 – 2 hours 30 minutes
Session 6.4 – 2 hours 45 minutes</td><td>High Tea, accompanied by review of the work-shop</td></tr>
</table>

CHAPTER II

MODULE 0

Introductions and Training Overview

MODULE 0 INTRODUCTIONS AND TRAINING OVERVIEW

30 minutes

MODULE OVERVIEW:

This module provides an opportunity for participants to introduce themselves and to state their expectations from the training. It provides an overview of the agenda and objectives of the training, setting the stage for the remaining modules.

LEARNING OBJECTIVES:

By the end of this module, participants will be able to:

- State the rationale and objectives of the training
- Conceptualize the flow and steps of the training
- Name their fellow participants and the trainer
- Identify other participants' expectations
- Assess the extent to which their expectations will be met

MODULE CONTENTS:

1. Participant introductions and expectations
2. Overview of the training workshop

SESSION PLANS:

The material for this module is covered in one session, consisting of two activities.

SESSION 0.1 INTRODUCTION TO THE WORKSHOP

30 minutes

Activity 0.1.1 Breaking the ice, finding out about the participants and their expectations
This activity uses an icebreaker to find out more about participants and their expectations for the training workshop.

Using an icebreaker activity (Tool 1) can be a lot fun and a great way of starting a training session. A well designed icebreaker session helps everyone get to know each other and the trainer/facilitator, and can ultimately engage the participants more effectively in the workshop.

Method	Process	Time	Materials
Icebreaker	• Welcome participants to the workshop and introduce yourself. • Ask participants to jot down their expectations from the training workshop in the notebook provided. • Use one of the icebreaker activities provided to get participants to introduce themselves and give their expectations for the training workshop. • When participants are telling their expectations, note them on the flip chart provided with the help of the workshop facilitator.	10 mins	Flip charts Sticky notes Markers Tape Notebooks

Activity 0.1.2 Overview of the training workshop and its objectives
This activity uses either a PowerPoint presentation or a simple verbal description to let the participants know the objectives and agenda of the training workshop. The trainer/facilitator will try to compare the expectations of the participants noted in Activity 0.1.1 with the ones set by this handbook and will clarify the gaps, if any.

Method	Process	Time	Materials
Presentation	• Use PowerPoint presentation or talk through the agenda to cover the following topics: - Objectives of the workshop - Modules covered during the workshop - Tool kits that will be used to deliver the modules - Tentative time that it will take to complete all the modules and length of breaks allowed in between different sessions **Parking lot:** Hang a flip chart on the wall to note down queries of the participants that you can't answer immediately. Also, take note of any suggestion from the audience that can be incorporated into the modules in the following days.	20 mins	Laptop Multimedia projector Flip charts Sticky notes Markers Tape

Presentation materials:

- This training workshop offers a practical guide for adaptation planning
- The workshop will guide the planning process for practitioners and facilitators engaged in identifying adaptation measures to reduce vulnerability both at the community and ecosystem levels
- A series of training modules have been developed to support the capacity building of local planners and facilitators to identify threats, hazards, and challenges to the climate across different sectors

Slide on Objectives:

- Build common understanding of climate vulnerability assessment and adaptation planning
- Consolidate different methodologies, approaches, and tools endorsed by the Ministry of Science, Technology and Environment in the Local Adaptation Plans for Action Framework and LAPA Manual
- Build capacity of master trainers to facilitate adaptation planning, identify adaptation strategies, and mainstream them into local planning processes

Slide on Overview of schedule:

<table>
<tr><th>Day</th><th colspan="5">Time</th></tr>
<tr><td></td><td>8:30-9:00</td><td>9:00-12:00</td><td>12:00-13:00</td><td>13:00-17:00</td><td>17:00-17:30</td></tr>
<tr><td rowspan="4">Day 1</td><td rowspan="9">Welcoming Tea</td><td>Session 0 – 30 mins</td><td rowspan="4">Lunch</td><td></td><td rowspan="4">Pre-briefing of Module 3</td></tr>
<tr><td>Session 1 – 45 mins</td><td>Session 2.3 – 2 hours</td></tr>
<tr><td>Session 2.1 – 15 mins</td><td>Session 2.4 – 45 mins</td></tr>
<tr><td>Session 2.2 – 45 mins</td><td>Session 2.5 – 45 mins</td></tr>
<tr><td>Day 2</td><td>Session 3.1 – 2 hour 30 mins</td><td colspan="3">Session 3.3 – 6 hours (Field Practice)</td></tr>
<tr><td rowspan="3">Day 3</td><td>Session 3.2 – 1 hour 45 mins</td><td rowspan="5">Lunch</td><td colspan="2">Session 4.2 – 45 mins</td></tr>
<tr><td>Session 3.4 – 1 hour 30 mins</td><td colspan="2">Session 5.1 – 1 hour</td></tr>
<tr><td>Session 4.1 – 1 hour 30 mins</td><td colspan="2">Session 5.2 – 2 hours 45 mins</td></tr>
<tr><td rowspan="2">Day 4</td><td>Session 6.1 – 45 mins</td><td>Session 6.3 – 2 hours 30 minutes</td><td rowspan="2">High Tea, accompanied by review and reflection</td></tr>
<tr><td>Session 6.2 – 2 hours</td><td>Session 6.4 – 2 hours 45 minutes</td></tr>
</table>

Note to facilitating team: Present one slide that shows the overall agenda for the whole training workshop. This will depend on how you put together the different training modules and how many days your training workshop will be.

TOOLS AND APPROACHES:

TOOL 1 ICEBREAKER

Example 1: Always Better with Two[2]

Process	Materials needed	Additional notes
Pair people together. Ask them to spend 2 minutes each talking about themselves. At the end of 4 minutes, ask all participants to come back together as a group and introduce each other. Ask them to tell the other person's name, his/her expectations from the training workshop, and anything else that is interesting.	None	Top highlights
Example 2: Rubber ball		
Process	**Materials needed**	**Additional notes**
Ask one of the participants to voluntarily raise his hand to hold the rubber ball. Ask him to introduce himself and state his expectations from the workshop. After that, ask him to throw the ball to one of the participants who will then follow the same steps. This will continue until everybody has introduced themselves.	A rubber ball	If there is enough time, you can ask participants to tell a bit about themselves, their family, and their village.

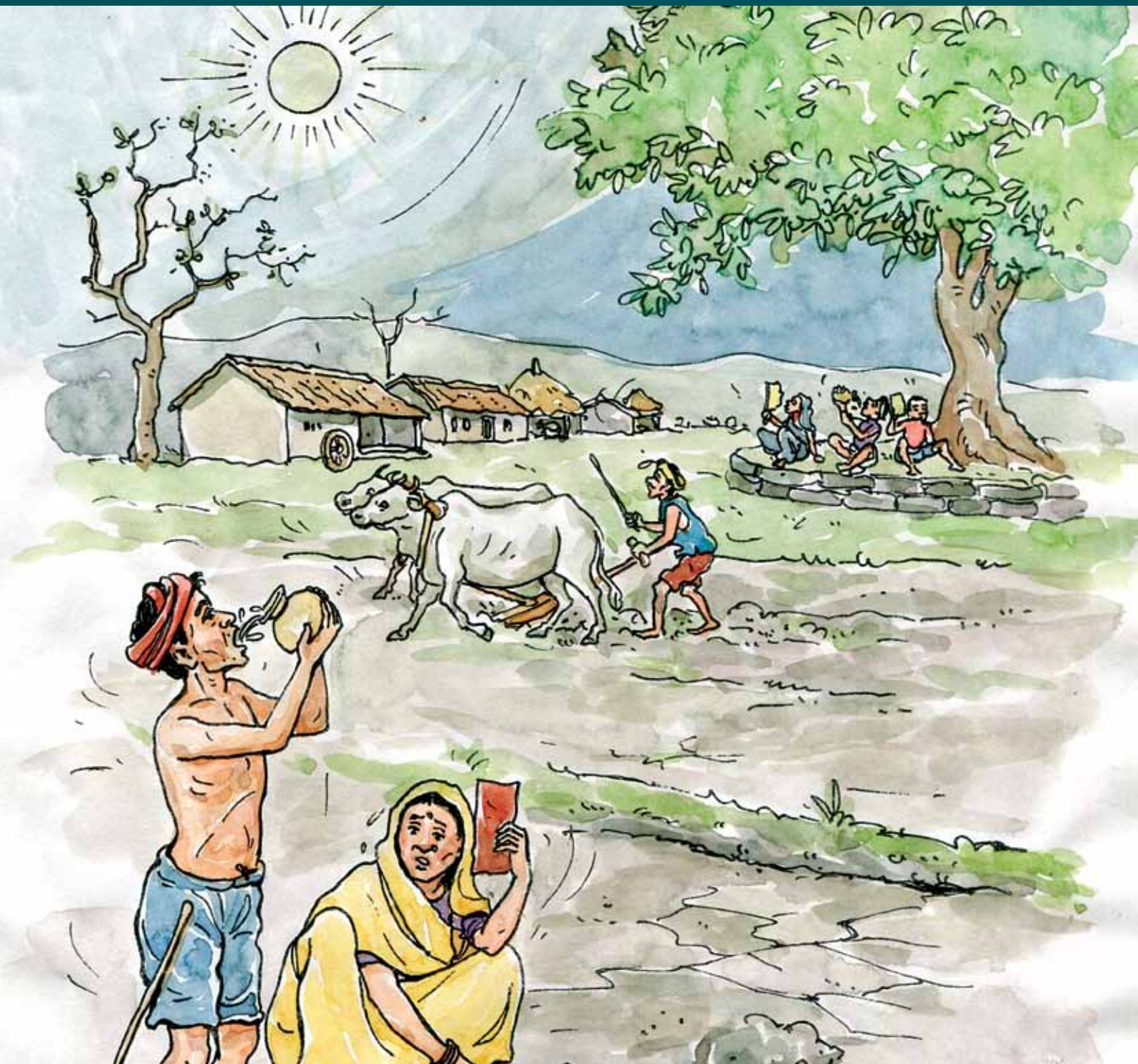
ADDITIONAL RESOURCES:

- http://humanresources.about.com/od/icebreakers/tp/Everything-Ice-Breakers.htm
- Collection of Exercises and Role Plays, Santosh Sharma and Naniram Subedi, CARE Nepal, 2003.

[2] Source: http://www.trainerbubble.com/Products/Short_Sessions_Free_Icebreakers.aspx?CategoryID=35&SubCategoryID=&SubSubCategoryID=103

MODULE 1

Understanding Climate Change



MODULE 1 UNDERSTANDING CLIMATE CHANGE

45 minutes

MODULE OVERVIEW:

This module discusses the basic concepts of climate change and its causes, with particular emphasis on Nepal.

LEARNING OBJECTIVES:

By the end of this module, participants will be able to:

- Describe climate change and its causes
- Explain the difference between climate and weather
- Properly explain the commonly used terminologies in climate, environment, and integrated planning
- State clearly what has been observed in Nepal in relation to climate change
- Describe key national and local climate change initiatives in Nepal

MODULE CONTENTS

1. Weather, climate change and its causes
2. Climate change in the context of Nepal
3. Climate change initiatives in Nepal

KEY WORDS AND CONCEPTS

- **Climate and weather:** The terms climate and weather are sometimes used interchangeably, but they are in fact different, though related, phenomena. Weather refers to short-term atmospheric conditions while climate refers to the weather descriptions over a long-term. Weather is measured by temperature, humidity, wind speed, atmospheric pressure, cloudiness, and precipitation. Climate is the average, or typical, weather conditions of a given area observed over a long period of time, usually 30 years or more.

  Different areas, or climate zones as they are called, are distinguished from each other by their prevailing temperature and precipitation, which have a natural range and variability within zones. Climate variations may occur from year to year, one decade to another, one century to another, or over any longer time scale. Weather conditions change quickly even within a short time span. For example, it may be sunny and dry one day and rainy and cool the other day. Climate, on the other hand, is slower to change, but the implications of the change are far-reaching.

- **Climate change:** Climate change is the change in climate due to increase in the Earth's temperature caused by a build-up of carbon dioxide and other greenhouse gases in the atmosphere due to human activity, such as burning coal, oil, and natural gases for energy and transportation; deforestation; and various agricultural and industrial practices.

- **Climate variability:** Climate variability is the way that climatic variables (such as temperature and precipitation) depart from their average state, either above or below the average value. Although daily weather data depart from the climatic mean, the climate is considered stable if the long-term average does not significantly change.

- **Climate impacts:** Consequences of climate change on natural and human systems.

- **Climate change adaptation:** Climate change adaptation means strengthening human and natural systems to withstand the effects of climatic stresses. It is the adjustment in natural or human systems in response to actual or expected climatic occurrences or their effects to reduce harm or takes advantage of beneficial opportunities. For people, it means being ready for climate change by building capacity and putting measures in place to cope with and recover from the impacts of climate change. It also means preparing ourselves to live with any climate-induced change to our surroundings.

- **Climate change mitigation:** Climate change mitigation is about reducing human impact on the climate system. It involves measures to reduce greenhouse gas emissions by limiting activities that produce greenhouse gases, or to enhance the natural systems or sinks that remove greenhouse gases from the atmosphere. Without mitigation, climate change would continue unchecked and would eventually outstrip all our efforts to adapt.

SESSION PLANS:

The material for this module is covered in one session, consisting of three activities.

SESSION 1.1 CLIMATE CHANGE, CAUSES AND NEPAL'S CONTEXT

45 minutes

Activity 1.1.1 Testing the knowledge of participants

Before going into the details of this module, conduct a basic quiz and discussion to test the state of knowledge of the participants about the fundamentals of weather, climate change and its cause, and related matter.

Method	Process	Time	Materials
Quiz Discussion	• Ask basic questions about climate change, such as: - Have you heard about weather and climate? What do you think is the difference between them? - Do you know what climate change means and how it is caused? - Have you seen any effects of climate change in your village/community? • Conduct the climate change quiz based on Toolkit 2 below. The answers to the quiz questions are included in the toolkit. 🔔 Write down the questions set for this activity beforehand on the flip chart and keep filling up the chart as participants respond.	10 mins	Flip chart Markers Tape

Activity 1.1.2 PowerPoint presentation by the master trainer or climate change expert (if invited)

Use this opportunity to clarify any misconceptions that the participants have on climate change. Do not get into technical details of climate change, but make sure that the participants get a clear understanding of various concepts and terminologies used in relation to climate change.

🔔 Distribute the meta-cards in Tool 3 before starting this activity.

Method	Process	Time	Materials
Presentation	• Use PowerPoint presentation to cover the following topics: - Difference between weather and climate - Cause of climate change - Illustration of causes of climate change based on climate science - Climate change in the context of Nepal - Initiatives taken by Nepal in response to climate change with special focus on NAPA, LAPA, and Nepal's Climate Change Policy **Parking lot:** Hang a flip chart on the wall to note down queries of the participants as you go through the presentation. Answer as many questions as possible depending on how much time you have for this particular activity.	20 mins	Laptop Multimedia projector Flip charts Sticky notes Markers Tape

Activity 1.1.3 Video Presentation: Climate Change in Nepal's context

Video presentation is a powerful way of communication when it comes to complex issues like climate change. Make sure you choose the most appropriate video that is relevant to the context of Nepal.

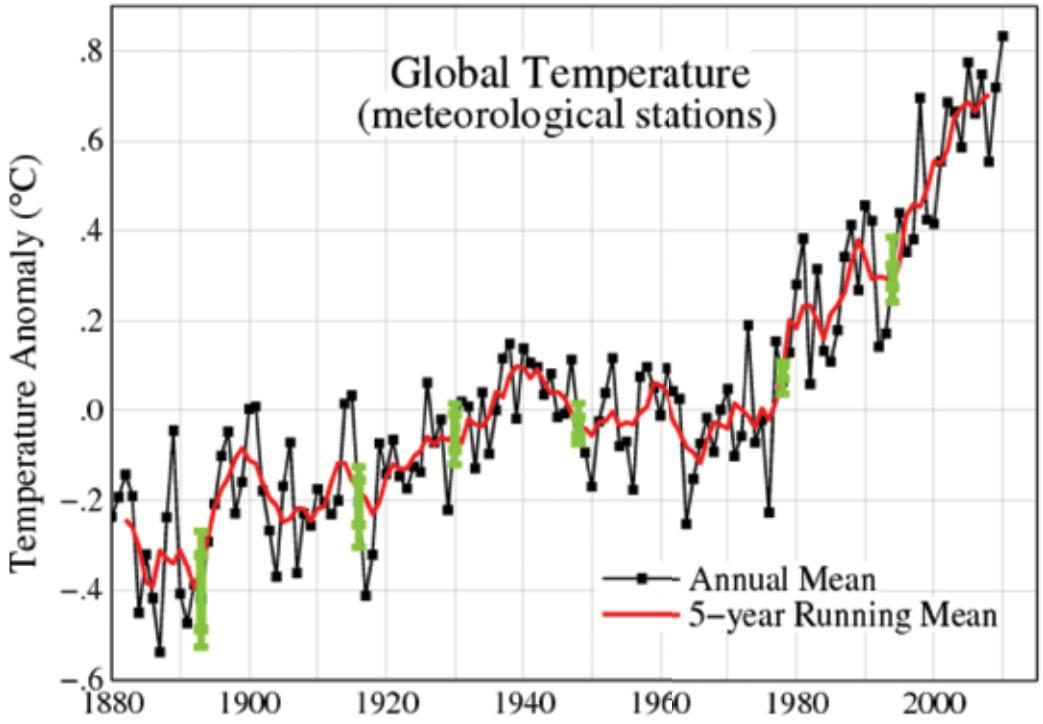
Method	Process	Time	Materials
(1) Video presentation	When starting the video presentation, tell the participants that this video is about the reporting on how climate change is affecting Nepal's communities throughout the country.	5 mins	Laptop Multimedia projector
(2) Discussion and climate briefing	This activity is to let the participants ask as many questions as possible to clarify their misconceptions on different aspects of climate change, including commonly used terminologies. • Allow participants to ask questions by raising their hands. • Note down their questions on the flip chart provided. • Since time is limited, try to collect as many questions as possible and discuss them towards the end. • At the end of this activity, provide a climate briefing on the topics covered during this module (in Nepali).	10 mins	Flip charts Sticky notes Markers Tape

Presentation slide 1.1: Are weather and climate the same?

Weather is the conditions you experience on a daily basis (such as rain, humidity, temperature).

Weather can change from minute to minute, hour to hour, day to day, and season to season.

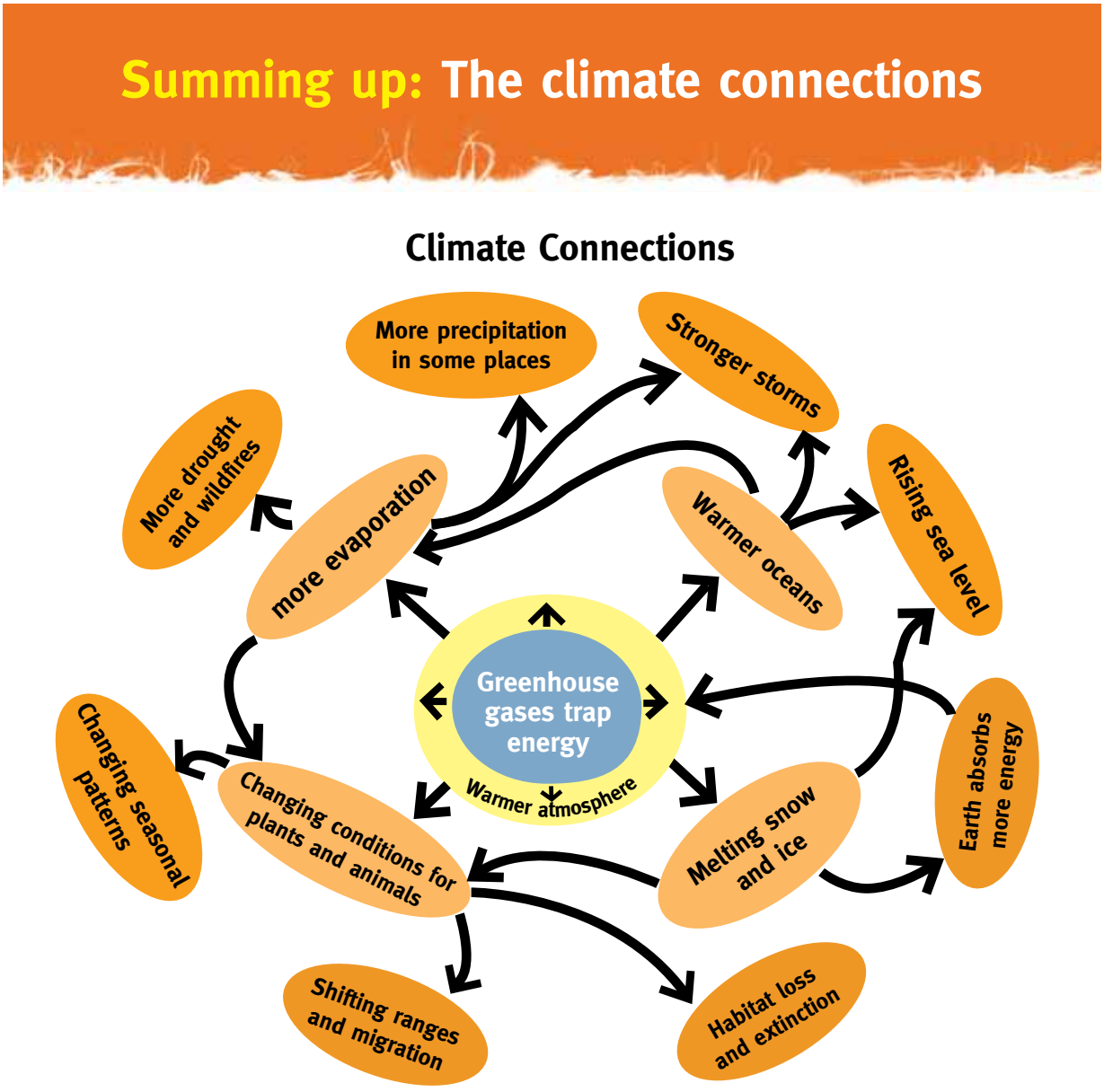
Climate is the average weather conditions for one location over a long period of time. Climate change is measured using distinct variables: temperature, rain or snowfall, dryness or wetness, cloudiness or brightness, wind and storms.



Presentation slide 1.2: How do people contribute to climate change?

- People create greenhouse gas emissions by burning fossil fuels to power industry, agriculture, transportation, etc.
- Now human activities are releasing much larger amounts of greenhouse gases into the atmosphere than before
- How? Through activities such as burning fossil fuels (coal, oil, and gas) and cutting down trees (deforestation)
- Climate change is mainly the result of human activities

Presentation slide 1.3: The climate connections

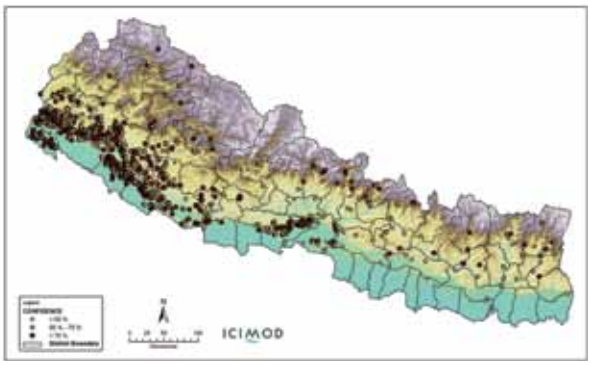


This diagram shows how global warming can lead to a variety of other changes
Source: Hariyo Ban Program TOT handouts, 2012

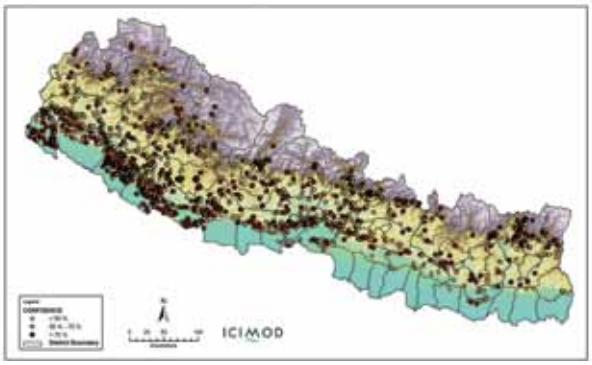
Presentation slide 1.4: Forest fire and their impacts across Nepal

Forest fires and their impacts across Nepal 2008 and 2009.

Forest Fire Incidents in Nepal in 2008



Forest Fire Incidents in Nepal in 2009



LOSS	IMPACT
Timber losses based on the area of land burnt or partially burnt	83,382 hectare x commercial timber/hectare x average price of timber from that forest type + partially burnt x formula above=total commercial value
Revenue loss	NTFPs estimates/hectare x 83.382 x 50 years until regeneration
Impact on soil moisture	Groundwater recharge reduced
Loss of life and cattle	From report
Bio-diversity loss	Some measured in NTFPs losses; others not valued yet
Carbon emission/reduced carbon banking	Increase in greenhouse gases and reduction in sequestering
Black soot	Health burden and increase rate of glacial melt
Added erosion/mass wasting	Loss of land
Increased regional sedimentation	Decreases in reservoir life spans,damage to irrigation appurtenances and turbines
Decline in the functioning of embankments	Increased flooding downstream and risk of breaching
Decreased fuel load and production of forests	Less fuel and productivity per unit area of the forest Reduction in sequestering potential
Regeneration and stock management	No benefits
Smoke	Health impacts

Source: Hariyo Ban TOT training handouts 2012

TOOLS AND APPROACHES:

TOOL 2 CLIMATE CHANGE QUIZ

Q1. Climate change and weather are the same thing. **A1.** False

Explanation: Refer to Key Terminologies listed above.

Q2. Climate change is caused by increasing population**. A2.** False

Explanation: Climate change is caused by greenhouse gases, namely carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), and chlorofluorocarbons (CFC).

Q3. Nepal won't be much affected by climate change. It is only developed countries like the US, UK, and Japan that will face the negative impacts of climate change. **A3.** False

Explanation: Countries like Nepal are among the most vulnerable to severe impacts of climate change. Nepal is already facing the challenges posed by climate change from melting glaciers, flash floods and landslides, droughts, the increased intensity of rainfall, etc.

Q4. Nepal can't do anything about climate change because it is already too late. **A4:** False

Explanation: Although Nepal emits only 0.027% of global greenhouse gas emissions, it is heavily impacted by climate change. Nepal can exert pressure on the developed countries to reduce their emissions and help Nepal financially and technically to cope with the impacts of climate change through different means. We can also launch our own initiatives on a national and local level to help farmers adapt to the changes.

Q5. The warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea levels. **A5:** True

Explanation: This sentence comes from the Intergovernmental Panel on Climate Change (IPCC) summary for policymakers 2007. The IPCC assessed climate change in policy relevant ways, and the report has been endorsed by major scientific communities and the national academies of sciences in many countries. Most of the observed changes in global average temperature since the mid-twentieth century is very likely due to observed increases in anthropogenic greenhouse gas concentrations.

Process	Materials needed	Additional notes
Ask the participants to sit in a circle. Ask them to respond to the questions by saying either, "True," "False," or "I don't know." Do not ask too many questions, limit them to five or six. Give the answers at the end of the session.	Flip chart Marker	Get the questions ready on the flip chart before the start of the session. Make sure you hide the answers with explanations at the beginning.

TOOL 3 CLIMATE CHANGE META CARDS AND BRIEFING

Refer to key terminologies listed above. Put them in different colored meta cards with key terminology on the front and explanations on the back. Also, produce a one-page climate briefing on Nepal to be distributed to all the participants.

Process	Materials needed	Additional notes
Before the start of presentation and after the end of the quiz session, distribute the meta cards to all participants so that they can constantly refer to those terminologies throughout the training workshop.	Meta cards Marker	You can choose different colors for the cards. You can assign red to the most important terminologies and other colors to less important ones.

ADDITIONAL RESOURCES:

Included below is a link to climate change videos in the context of Nepal:

- Nepalese Voice Climate Change Fears: a video by Al Jazeera http://www.youtube.com/watch?v=iC9j4vDe2Ig
- Video clips on climate change in Nepal produced by LFP and UNDP (as available)
- General climate change videos that show global impacts http://video.nationalgeographic.com/video/
- https://twitter.com/Keeling_curve
- http://climate.nasa.gov/interactives/climate_time_machine
- National Framework on Local Adaptation Plans for Action, Ministry of Science Technology and Environment, Government of Nepal. http://moste.gov.np/
- Definition of climate change and REDD related terms, Ministry of Forest and Soil Conservation

MODULE 2

Climate Change Impacts

MODULE 2 CLIMATE CHANGE IMPACTS

4 HOUR 30 MINUTES

MODULE OVERVIEW:

This module focuses on the impacts of climate change, especially on ecosystem services and makes the participants aware of how those impacts differ by age, sex, socioeconomic strata, ethnic origin, geography, and other socio-cultural factors.

LEARNING OBJECTIVES:

By the end of this module, participants will be able to:

- Explain the meaning of ecosystem and its various services
- Categorize climate change impacts on ecosystem services into biophysical/ecological and socioeconomic services
- Identify the key sectors sensitive to climate change and how those impacts are affecting the functioning of those sectors
- Identify which sectors are more resilient to climate change impacts
- Understand what sort of strategies and adaptation options would be required to make those sectors climate change resilient
- Describe how impacts of climate change differ by people's livelihood options, age, sex, socioeconomic strata, ethnic origin, education level, geographical location, ease of access to social and public services, etc.

SESSION 2.1 INTRODUCTION TO CLIMATE CHANGE IMPACTS

15 MINUTES

Activity 2.1.1 PowerPoint presentation by the master trainer or climate change expert (if any)
This activity will shed light on the overall impacts of climate change seen globally so that the participants get a broader picture. After that, it will try to narrow down the impacts to national, regional, and local levels so that participants will get a chance to relate the global impact to the local ones.

Do not try to present impacts that the participants can't visualize in their local context, e.g. coral bleaching.

Method	Process	Time	Materials
Presentation	Link with the earlier module on climate change. • Use PowerPoint presentation to cover the following topics: - Describe the major global impact of climate change such as increase in temperature, alteration in precipitation, sea level rise, etc. - Describe the present and anticipated effects and impacts of rise in temperature. - Describe the effects and impacts caused by alteration in precipitation. - Describe the present and anticipated effects and impacts of rise of sea level. - Explain sectoral impacts with clear evidence based on facts, figures, case studies, etc. - Briefly describe the current and anticipated opportunities that climate change brings. Clarify that these opportunities are minimal and nothing compares to the adverse impacts.	15 mins	Laptop Multimedia projector

SESSION 2.2 CLIMATE CHANGE IMPACTS ON ECOSYSTEM AND THEIR SERVICES

45 MINUTES

Activity 2.2.1 PowerPoint presentation by the master trainer or climate change expert (if any)
Using visual images of the ecosystem and its various services, this presentation will explain the fundamentals of ecosystem services so that the participants can relate the content of the presentation to the actual images.

Method	Process	Time	Materials
Presentation Visual tour of ecosystem services	• Use PowerPoint presentation to properly explain how various types of ecosystems function, how they are inter-related, and how they are vulnerable to the impact of climate change. • Use Tool 4 as the visual demonstration of the ecosystem and its services.	15 mins	Laptop Multimedia projector Flip charts Tape Sticky notes Markers

Activity 2.2.2 Group assignment on ecosystem services
This activity will encourage group to discuss on types of ecosystem services and potential impacts of climate change on the ecosystem services.

Method	Process	Time	Materials
Group work	Form small groups of at most 3 participants and ask them to list at least 3 impacts of climate change on each type of ecosystem service discussed in Activity 2.2.1. 🔔 Write down the list of climate change impacts mentioned by participants on a flip chart so as to discuss more about them in Activity 2.2.3.	15 mins	Notebooks Pen Flip charts

Activity 2.2.3 PowerPoint presentation on climate change impacts on ecosystem services
Using visual images of an ecosystem and its various services, this presentation will explain the fundamentals of ecosystem services so that the participants can relate the content of the presentation to the actual images.

Method	Process	Time	Materials
Presentation Visual tour of various services under each ecosystem service	• Use PowerPoint presentation to cover the following topics: - Properly explain how climate change impacts each of the ecosystem services (using individual service types under each category as given in the tool). While explaining, try to break the impacts into pure ecological and wider socioeconomic aspects to give participants more clarity. - Try to draw local examples while explaining the impacts and do not forget to relate them to the list of impacts that the participants came up with. • Use Tool 5 as the visual demonstration of ecosystem services and sub-services.	15 mins	Laptop Multimedia projector Flip charts

SESSION 2.3 CLIMATE CHANGE IMPACTS ACROSS NAPA THEMATIC AREAS

2 HOURS

Activity 2.3.1 Colored flash card game

This activity will follow a participatory group exercise to list what participants think the major climate change impacts are. NAPA has identified six thematic areas:

1) Agriculture and food security
2) Forests and biodiversity
3) Water resources and energy
4) Climate induced disasters
5) Public health
6) Urban settlements and infrastructure

Hang a flip chart containing NAPA identified 6 thematic areas on the wall, visible to all participants prior to starting this activity. Assign one color to each thematic area.

Method	Process	Time	Materials
Flash Card Game	• The participants will be divided into groups of three or four each, depending on their total number. The group must have a proper balance from gender and social inclusion points of view. • The participants will be given flash cards of different colors, with at least ten cards of each color. • The participants will be asked to write down the climate change impacts on each thematic area of NAPA based on unique color assigned to each thematic area. • After this, participants will be asked to divide themselves into six different groups based on the color of cards they are holding. • The participants will themselves state the different impacts they have come up with and the trainer/ facilitator will note them down on the flip chart in six different columns.	45 mins	Six differently colored flash cards Pens Flip chart

Activity 2.3.2 PowerPoint presentation on climate change impacts across NAPA thematic areas
This activity is a continuity of Activity 2.3.1., and will further go into details on the impacts of climate change on six different NAPA thematic areas. It will highlight how those different sectors are inter-related to each other, and how impacts on one sector may have negative ramifications on others. This gives the participants an opportunity to relate impacts on one sector to others so that they understand from the very beginning that no sector should be thought about in isolation.

Method	Process	Time	Materials
Presentation Participatory discussion	• Use PowerPoint presentation to cover the following topics: - Describe in detail the six different thematic areas of NAPA and the reason behind grouping them into six. - Give an overall picture of climate change impacts on those sectors at a national level and narrow it down to regional and local level. - Describe how impacts of climate change on one sector have immediate ramifications on others. Try to present case studies or examples to illustrate the causal relation. - Explain which sectors are more resilient than others from a climate change point of view, depending on different parameters like geography, sex, age, etc. - When the presentation is over, open the floor for any questions. Encourage the participants to answer the questions asked by fellow participants, or at least to give their opinion. 🔔 If any impact listed from Activity 2.3.1 comes up on the trainer's presentation, mention it subtly so that it engages participants.	1 hour 15 mins	Laptop Multimedia projector Flip charts

SESSION 2.4 CLIMATE CHANGE IMPACTS ON COMMUNITY AND PEOPLE

45 MINUTES

Activity 2.4.1 Group discussion and clustering
This activity will use the group discussion method to identify the impacts of climate change on community, households, and people.

Method	Process	Time	Materials
Group work Clustering	• The trainer will divide participants into random groups with a balanced representation of men and women and participants from marginalized groups. • The participants will be asked to brainstorm within their groups about what sorts of climate change impacts they have faced in their community and individually. • The trainer/facilitator will list the impacts coming up from all groups on the flip chart, and cluster them into similar groups for the ease of discussion later. • The trainer finally discusses the similarly grouped impacts in a sequence so that participants get to know those that they might not have known about before but which still existed in the community. 🔔 The facilitator should moderate different groups throughout the discussion session. At the end of the session, the facilitator should make sure that the list of impacts is kept safe for other modules that follow.	45 mins	Flip charts Sticky notes Markers Tape

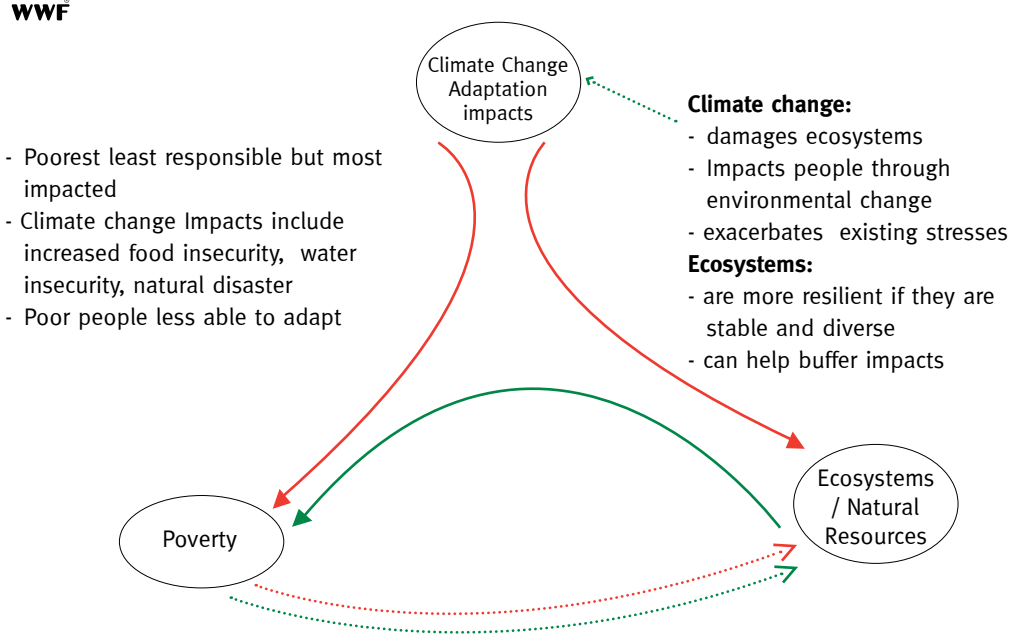
SESSION 2.5 CLIMATE CHANGE IMPACTS ON PEOPLE OF DIFFERENT ETHNICITY, GENDER, AGE AND REGIONS

45 MINUTES

Activity 2.5.1 Secret flash card and clustering
This activity will use the flash cards as a medium of noting down climate change impacts from various angles, viz. ethnicity, gender, age, sex and region.

Method	Process	Time	Materials
Secret flash card Clustering	• Each participant will be given similarly colored flash cards to maintain confidentiality. • The participants will be asked to write down their details (ethnicity, gender, age, region, sex, etc.) on the back of the flash card and the climate change impacts that they have faced on the front. Under no circumstances should the trainer ask the participants to write down the impacts based on any one angle because such an attempt will result in biased opinion. The information on the back will later automatically reveal the segregated impacts. • The trainer and his/her team should spend quality time in clustering those impacts into different groups (e.g. X number of female participants think that climate change will … and so on). • Finally, the trainer should discuss those impacts in a group so that what the group thinks about particular impacts comes to light. The trainer should give his expert opinion last. 🔔 The trainer/facilitator should list the different angles of analysis of impacts on the flip chart hung on the wall beforehand. At the end of the session, the facilitators should dispose off the secret flash cards for confidentiality.	45 mins	Flash cards Pens Flip chart Tape Markers

Climate change, poverty and ecosystem linkages



- Poor people depend on natural resources
- Poor people suffer from ecosystems degradation
- Changes in NRM management can help build resilience of ecosystems and communities
- Natural resources can be the wealth of the poor
- Negative relationship and positive relationship

Source: Hariyo Ban Program TOT handouts, 2012

Impact of climate change on the biodiversity

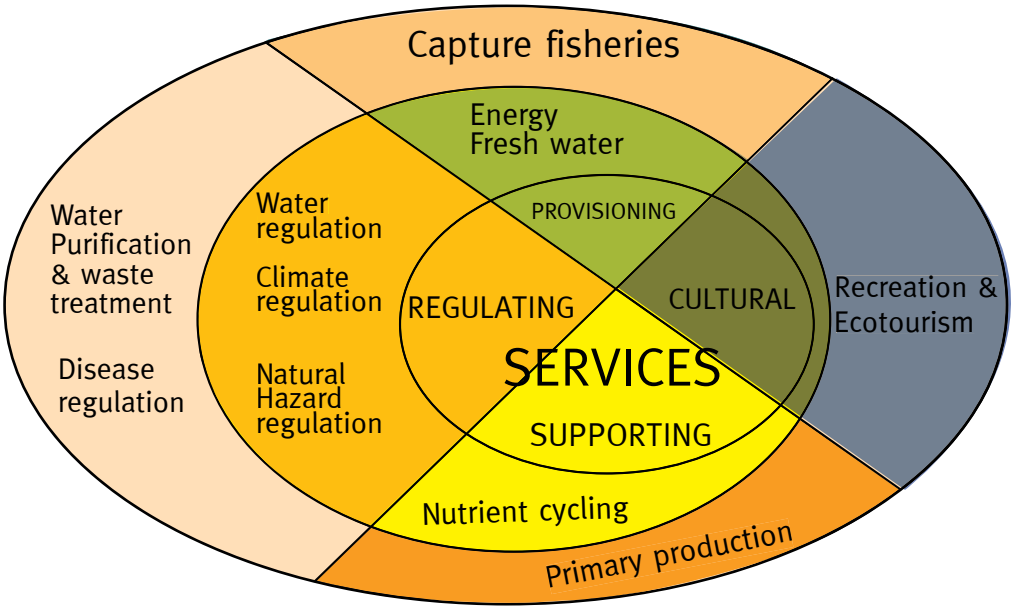
Possible Losers	Possible winners
Bigger, endemic wild forest animals	Smaller, highly mobile Organisms
Plant species, which appear at the much later stage of succession (climax trees)	Plant species which invade on fallow sites fast (herbs, pioneer trees species)
Species with smaller population (e.g. Acer, Betula, Taxus)	Species with bigger populations, having habitat on larger area (*Pinus roxburghii, Acacia catechu*)
Species, which are at higher altitudes or restricted to valleys	Species which are in midhills or lower hills

Source: ICIMOD

Source: Hariyo Ban Program TOT handouts, 2012

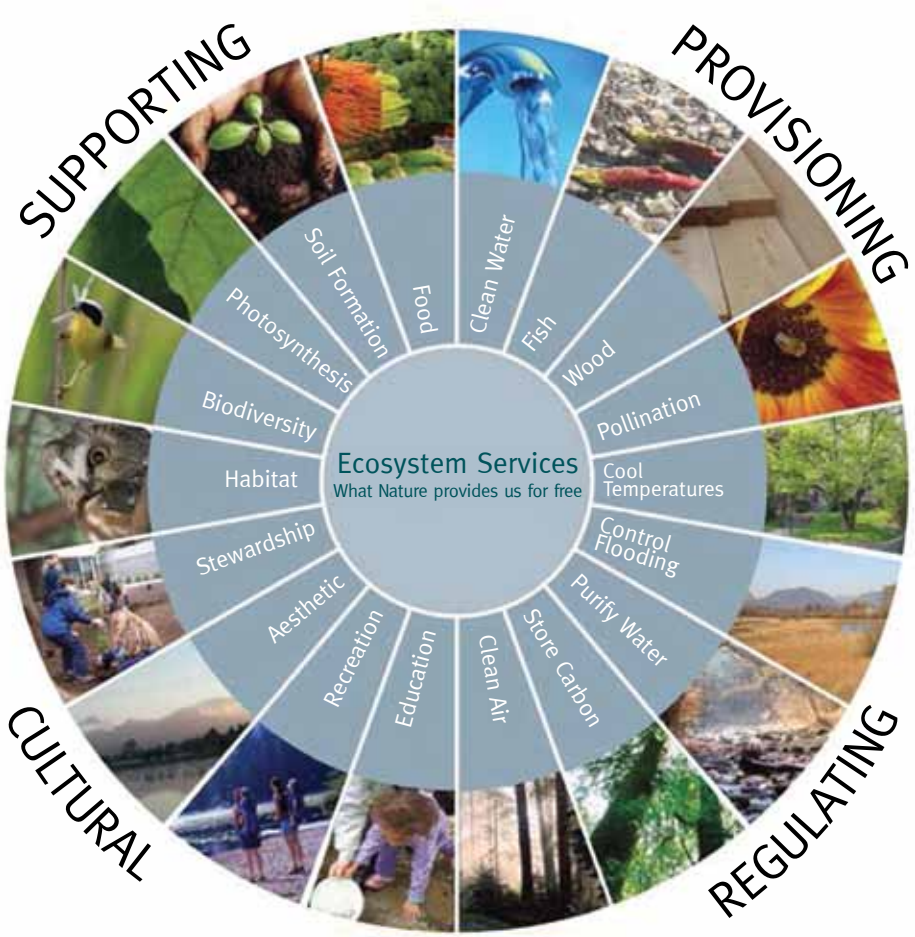
TOOLS AND APPROACHES

TOOL 4 VISUAL PRESENTATION OF ECOSYSTEM SERVICES



Source: http://www.unep.org/ecosystemmanagement/Introduction/tabid/293/language/en-US/Default.aspx

TOOL 5 VISUAL PRESENTATION OF VARIOUS TYPES OF SUB-SERVICES UNDER EACH ECOSYSTEM SERVICE



Source: http://www.personal-mastership.com/contribution-community/gratitude-for-ecosystem-services/

Process	Materials needed	Additional notes
While giving the PowerPoint presentation, use this image to take different sub-services of ecosystems (e.g. carbon storage as a regulating service) and explain how climate change will impact that particular sub-service under each service type. This will help the participants relate the discussed impacts with the actual image.	Image printed on a large chart	

GROUP EXERCISE 2.1: PRACTICE IDENTIFYING CLIMATE CHANGE IMPACTS ON ECOSYSTEM

Duration: 45 minutes

Objective:
- To identify climate change impacts on a selected ecosystem

Process:
- Break participants into smaller groups (4–6 in each).
- Have the group first identify an ecosystem or area that you already know well (for example your project area) and complete the following tasks in about 30 mins, using a flip chart to record key points. Please be prepared to discuss your points in a plenary session.
- For the selected area or ecosystem, identify major climate exposures, both past and current.
- Identify the impacts on the ecosystem and ecosystem services.
- Give each group 10 mins to present in plenary.

GROUP EXERCISE 2.2: PRACTICE IDENTIFYING CLIMATE CHANGE IMPACTS ON PEOPLE

Duration: 45 minutes

Objective:
- To brainstorm climate change impacts on people located in a selected ecosystem

Process:
- Break participants into the same smaller groups from Group Exercise 2.1.
- Have the group use the same chosen ecosystem or area from the previous exercise. The group has to complete tasks in about 30 mins, using a flip chart to record key points. Please be prepared to discuss the points in plenary. Someone who is assigned by the group will be a reporter.
- Building on the same case study from the previous exercise, identify the impacts on the people who live in the ecosystem and who benefits from the ecosystem services.
- Give each group 10 mins to present in plenary.

ADDITIONAL RESOURCES:

- Turn Down the Heat: Why a 4°C World Must Be Avoided, World Bank, 2012.
- The Climate Change Knowledge Portal Beta is a central hub of information, data, and reports about climate change around the world. Go to: http://sdwebx.worldbank.org/climateportal/index.cfm
- The Summary for Policymakers of the Working Group I, Contribution to the Fifth Assessment Report, IPCC, 2013. Available at: http://www.ipcc.ch/report/ar5/wg1/

MODULE 3

Vulnerability Assessment and Adaptation Planning

MODULE 3 VULNERABILITY ASSESSMENT AND ADAPTATION PLANNING

11 HOURS 45 MINUTES

MODULE OVERVIEW:

This module introduces some of the most effective vulnerability assessment techniques and methodologies and explains how to prepare adaptation plans using an innovative adaptation planning framework.

LEARNING OBJECTIVES:

By the end of this module, participants will be able to:

- Understand the key terms and phrases such as vulnerability, adaptation, adaptive capacity, resilience, etc.
- Understand the concept of vulnerability
- Grasp connection between vulnerability, hazards, and stresses
- Learn how to access and use climate science information for climate risk and vulnerability analysis
- Understand the importance of gender and social inclusion in the vulnerability analysis
- Learn to use some of the participatory tools for climate vulnerability assessment and adaptation planning
- Apply class learning on-site to do a vulnerability assessment and recommend how adaptation planning can be done in that context

MODULE CONTENTS:

1. Basic concept of Climate Vulnerability and Adaptation Planning
2. Use and access of climate information
3. Participatory tools and methodologies to do vulnerability assessment and adaptation planning
4. Application of VAAP tools and methodologies in the community
5. An integrated community and ecosystem approach to adaptation and mitigation

KEY WORDS AND CONCEPTS:

- **Vulnerability:** The extent to which climate change may damage or harm a system. Vulnerability depends not only on a system's sensitivity but also on its ability to adapt to new climatic conditions (IPCC SAR 1995).

- **Biophysical vulnerability:** A function of the character, magnitude, frequency, sensitivity, and adaptive capacity of a system to the hazard to which is exposed.

- **Social vulnerability:** The extent to which a system is susceptible to damages.

- **Risk:** The combination of the probability of an event and its negative consequences.

- **Hazard:** A dangerous phenomenon, substance, or condition that may cause loss of life, injury, property damage, loss of livelihoods and services, social/economic disruption, or environmental damage (UNISDR 2009).

- **Sensitivity:** The degree to which a system is affected, either adversely or beneficially, by climate-related stimuli. The effect may be direct (e.g., a change in crop yield in response to a change in the mean, range, or variability of temperature) or indirect (e.g., damages caused by an increase in the frequency of coastal flooding due to sea level rise) (IPCC TAR 2001).

- **Adaptation:** The adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (UNISDR 2009).

- **Mitigation:** An anthropogenic intervention to reduce the sources or enhance the sinks of greenhouse gases (IPCC TAR 2001). Examples of mitigation measures are renewable energy technologies, waste minimization processes, and public transport practices, etc.

- **Coping capacity:** The ability of people, organizations and systems, using available skills and resources, to face and manage adverse conditions, emergencies, or disasters.

- **Adaptive capacity:** The ability of a system to adjust to climate change (including climate variability and extremes), to moderate potential damages, to take advantage of opportunities, or to cope with the consequences. (IPCC TAR 2001)

- **Resilience:** The ability of a system, community or society exposed to hazards to resist, absorb, accommodate and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential structures and functions (UNISDR 2009).

- **Integrated assessment:** A method of analysis that combines results and models from the physical, biological, economic, and social sciences, and the interactions between these components, in a consistent framework to evaluate the status and the consequences of environmental change and the policy responses to it (IPCC TAR 2001).

SESSION PLANS:

The material for this module is covered in four sessions.

SESSION 3.1 METHODOLOGY AND PROCESS FOR CLIMATE VULNERABILITY ASSESSMENT AND ADAPTATION PLANNING

2 HOURS 30 MINUTES

Activity 3.1.1 PowerPoint presentation on basics of vulnerability, adaptation and resilience
This activity will give a basic introduction to various terms used in the context of vulnerability assessment and adaptation planning. This will also explain what integrated assessment means in the context of climate vulnerability.

Refer to the key words and concepts defined above.

Method	Process	Time	Materials
Presentation	• Use a PowerPoint presentation to shed light on various important terms and concepts related to vulnerability assessment and adaptation planning. • Use Tool 6 to describe the vulnerability as a function of exposure, sensitivity and adaptive capacity.	15 mins	Laptop Multimedia projector

Activity 3.1.2 Access and use of climate science information			
Method	**Process**	**Time**	**Materials**
Presentation Group exercise	• Prepare a presentation to show why it is crucial to combine climate science with community knowledge to get information about future climate change impacts. Mention sources and methods of accessing scientific information and explain key steps and tools for conducting climate change analysis at the local level. • Use the printed example of climate and livelihood and ask participants to develop a seasonal analysis chart for two districts considering the impact of climate variability on livelihoods and climate change impacts on people and the ecosystem. • Brainstorm: What is the role and applicability of climate science in local level climate change analysis?	45 mins	Laptop Multimedia projector Flip charts Tape Sticky notes Markers
Activity 3.1.3 Participatory methods of vulnerability assessment			
Method	**Process**	**Time**	**Materials**
Participatory tools	Use Tool 6 through 13 to explain the available methods of vulnerability assessment. 🔔 If there is not enough time, some of the toolkits can be taught on the field exercise day.	1 hour 30 mins	Flip charts Markers Pens

SESSION 3.2 FROM VULNERABILITY TO ADAPTATION THROUGH STRENGTHENING ADAPTATION INITIATIVES

1 HOUR 45 MINUTES

Activity 3.2.1 PowerPoint presentation by the master trainer or climate change expert (if any)
This session will focus on how vulnerability, assessed though Session 3.1, can be reduced by strengthening adaptation initiatives. In doing so, this presentation will clarify the links between adaptation and mitigation, and how skewed focus on only adaptation or mitigation might lead to unsustainable planning that is not climate resilient.

Method	Process	Time	Materials
Presentation Case studies	• Use PowerPoint presentation to cover the following topics: - How vulnerability to climate change can be reduced by adaptation planning. • Present case studies from Nepal where community members have practiced adaptation activities that reduced vulnerability. • Encourage cross questions from participants in this session as they have already learned the vulnerability assessment methods in Session 3.1.	1 hour 45 mins	Laptop Multimedia projector Flip charts Tape Sticky notes Markers

SESSION 3.3 FIELD EXERCISE ON VULNERABILITY ASSESSMENT AND ADAPTATION PLANNING

6 HOURS

Activity 3.3.1 Application of learning from Session 3.1 and Session 3.2 to the field
This activity will give participants an opportunity to apply the skills they have gained through the previous two sessions to actually do a vulnerability assessment in the community.

Method	Process	Time	Materials
Participatory tool	• The participants will be divided into groups of 3–4. The group must have a proper balance of women and men and people from marginalized communities. • The trainer will brief participants on the types of toolkits they are going to use in today's field exercise. • The participants will be given all required materials (along with the handbook on how to use the tools) before heading off to the field. • Participants will be asked to keep a proper record of the results from this activity for discussion in the next session. 🔔 Depending on the time available for this particular activity, the trainer will advise which particular tool (from Tools 7 through 13) can be effectively used. The trainer should keep in mind that using fewer toolkits in depth is better than using all tools briefly.	6 hours	Tool book Handouts Flip charts Tape Sticky notes Markers Pens

SESSION 3.4 SYNTHESIS, PROCESSING AND ANALYSIS OF FIELD EXERCISE, OUTCOMES AND DEBRIEFING TO THE COMMUNITY

1 HOURS 30 MINUTES

Activity 3.4.1 Group discussion and synthesis of data
This activity will use the group discussion method to identify the impacts of climate change on the community.

Method	Process	Time	Materials
Group discussion Data synthesis	• Participants will be asked to present the findings from all tools used during the field visit on a separate large sheet. The same groups that were formed earlier will be used again. Each group selects a presenter for plenary sessions. • All groups will then come together and present their common findings on a separate sheet. If there are any findings where the groups can't reach a consensus, they should be asked to flag them on a flip chart for discussion later. 🔔 The facilitator should moderate different groups throughout the discussion and data synthesis session.	45 mins	Flip charts Sticky notes Markers Tape

Activity 3.4.2 Presentation of the findings from field exercise
This activity will use oral presentation to talk through the findings from all previous activities under Module 3.

Method	Process	Time	Materials
Presentation	• One participant from each group comes forward and presents the findings. 🔔 The facilitator/trainer should make sure that women and participants from marginalized groups are constantly encouraged to share their learnings.	15 mins	Flip charts Markers Pointing stick

Activity 3.4.3 Debriefing with the community
The group goes back to the community and presents the briefing prepared. This activity can be merged while conducting the community visioning exercise (refer Module 4).

Method	Process	Time	Materials
Presentation	The participants present findings of vulnerability assessment to the community from where all the information were collected. 🔔 The facilitator should make sure that this session is conducted fully in the local language, respecting the local culture and traditions.	30 mins	Flip charts Sticky notes Markers Tape Pointing stick

Presentation materials:

Group Exercise 3.1 Preparing seasonal analysis chart

- Using the printed example on climate as shown below and livelihoods, please develop a seasonal analysis chart for the two districts (30 mins)
- Presentations from participants (10 mins)
- Discuss impacts of climate change on 1) ecosystems (which?) and 2) people

Seasonal analysis chart

Season	Timing	Typical conditioning	Emerging conditions
Summer	April/May	Hot and dry, 30-40°c	**Summer** tending to hotter temperature (high rather than low 30°c), curtailed abruptly by early rains in may
Early rains	June	Early planting rains that break the heat of the summer	When **rains** arrive, they arrive earlier (April-May) and tend to be constant over 6-7 days with little respite, followed by hot, humid dry spells Harvest rains seem to have diminished
Main monsoon and harvest rains	July-September	30-35°c, increased humidity, main growing season	
	October/ November	Mainly showers, cloudy weather with vivid blue sky, lower humidity and temperature - a 'happy time'	
Dew	November	Cooling temperature, dry but with morning dew on plants	**Dew** season seems to be disappearing **Winter** tends to be shorter and warmer, rarely dropping below 10°c **Spring** seems to be disappearing as winter passes rapidly into summer
Winter	December/ March	Cold dry weather, 10°c or lower	
Spring	March	Warming, dry weather	

Source: http://www.christianaid.org.uk/Images/Climate-change-adaptation-toolkit-developing-climate-change-analysis-October-2010_tcm15-67268.pdf

TOOLS AND APPROACHES:

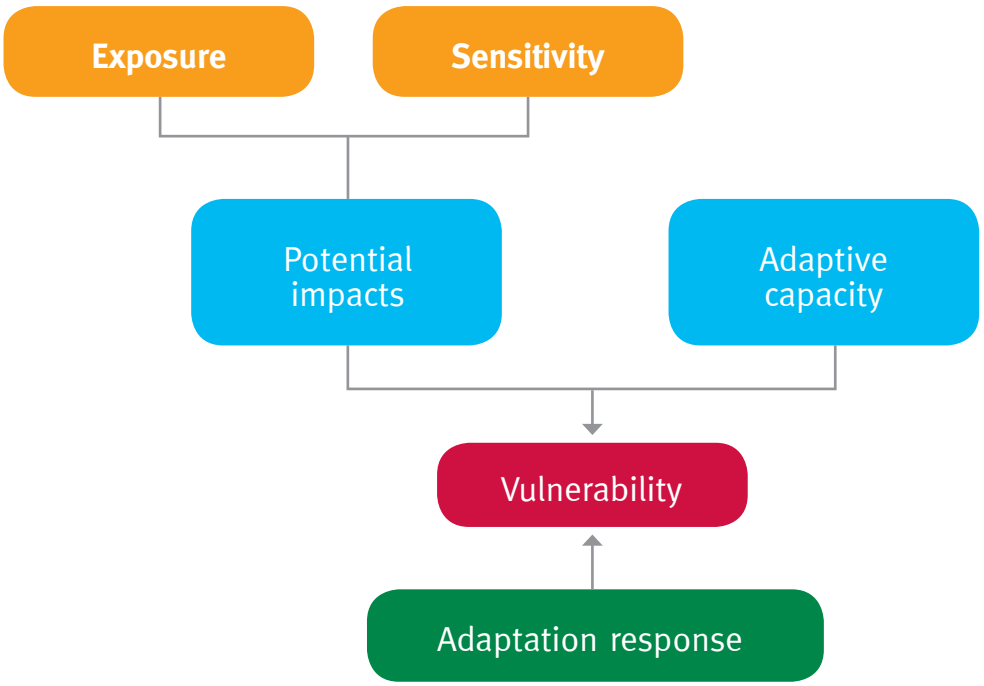
TOOL 6 VULNERABILITY CAUSAL FLOW CHART

There are three different components of vulnerability in the context of climate change: Vulnerability is a function of exposure, sensitivity and adaptive capacity.

Exposure to climate variation is primarily a function of geography which leads to climate variability and uncertainty. For example, coastal communities will have higher exposure to sea level rise and cyclones, while communities in semi-arid areas may be most exposed to drought.

Sensitivity is the degree to which a given community or ecosystem is affected by climatic stresses. For example, a community dependent on rain-fed agriculture is much more sensitive to changing rainfall patterns than one where mining is the dominant livelihoods. Likewise, a fragile, arid or semi-arid ecosystem will be more sensitive than a tropical one to a decrease in rainfall, due to the subsequent impact on water flows.

Adaptive capacity is defined as: The ability of a system [human or natural] to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities, or to cope with the consequences. One of the most important factors shaping the adaptive capacity of individuals, households and communities is their access to and control over natural, human, social, physical and financial resources. The focus of any vulnerability reduction activity, therefore, should aim at reducing exposure to climate variation and people's sensitivity towards it, and increasing people's adaptive capacity through various interventions (UNEP 2009).



Source: Alen Consulting, 2005 (modified)

TOOL 7 LIVELIHOOD PROFILING

Vulnerability assessment: **Adaptive Capacity**

Information on livelihood sources is always central to any vulnerability assessment study. The following table can be used as a format for assessing the livelihood status of study community/village.

Livelihood group	Characteristics	Wealth and vulnerability status	Proportion in overall population
	•		
	•		
	•		

A sample output has been given below for the reference (FAO 2009).

Livelihood group	Characteristics	Wealth and vulnerability status	Proportion in overall population
Large land owners with livestock	• 20–80 acres of land • 15–20 cows • 50–70 goats • 1–2 camels • Hire share croppers • A few in government service • Some involved in shop keeping/trading	Better off	10%
Medium land owners with livestock	• 5–20 acres of land • 3 cows • 20–50 sheep or goats • Daily wage labor, some seasonal migration and some working as laborers in Kathmandu • Only a few in government service • Few shopkeepers/traders	Middle	40%
Small land owners, some small livestock plus sharecropping	• 3–5 acres of share cropping land • 2 sheep or goats • At least one member engaged in seasonal migration to irrigated areas • 50% of households also work as wage labor locally or in cities • Tailoring (10 women)	Poor	30%

Landless poor	• May own 2–3 goats on share basis • Undertake herding livestock • Undertake mud plastering (women) • Undertake wood cutting/ selling • Reliance on charity • Reliance on child labor • Most widows are in this group	Very poor	20%

Process	Materials needed	Additional notes
The vulnerability assessment team should gather a few key informants at the community/ village level and ask them how different households/ people can be identified as being well-off, medium, poor and very poor (e.g. what kind of house do they have, how many cattle, what kind of occupation, etc.). Based on this, the team should start the assessment process. When they come up with the final table, the key informants can be asked to proportionate the households/people falling into each category into the percentage of the total population so as to make it representative of the entire community/village. This information can be further validated by consulting officials at the VDC/DDC.	Livelihood profiling table printed in multiple copies	

TOOL 8 HAZARD MAPPING

Vulnerability assessment: **Sensitivity**

A hazard map helps to record information about various types of climatic hazards affecting a community or a village. A sample hazard map is shown below:

Process	Materials needed	Additional notes
• Get a village or community map (area of study) and make a number of A3- (or larger) sized copies. • Distribute participants into a number of groups and provide each group with a copy of the map. • Ask each group to highlight areas in the map with different colors for each hazard, using colored markers. Some hazards may affect the same areas, so use different colors in overlapping patterns for such areas. • Consider exposure to hazards as a key criterion, rather than sensitivity or adaptive capacity (which will be assessed later). • Ask each group to present the hazard map in 3 minutes. • Compare different maps, identify commonalities and differences, and discuss with the whole group to build consensus. • Keep a record (digital photos) and/or store all the hazard maps for future reference.	A3 or larger-sized maps Pens Color markers	Continuous facilitation by trainers/facilitators throughout the mapping process helps clarify confusion. Mapping can take a lot of time. If the time is short, this activity can be conducted with others, with different groups doing different things.

TOOL 9 HAZARD RANKING

Vulnerability assessment: **Sensitivity**

Hazard ranking helps prioritize which hazards to focus on during the vulnerability assessment process and subsequent adaptation planning. The following table can be used while ranking the hazards.

Hazard	**High risk** (assess risk to communities and ecosystem)	**Medium risk**	**Low risk**
E.g. Drought		x	

Process	**Materials needed**	**Additional notes**
Use the same groups as before. • Ask participants to list the main hazards and rank them according to the table above. • Explain that hazards should be ranked taking into account the sensitivity and exposure of the households and community and their adaptive capacity. • Ask each group to present their ranking in 3 minutes. After presentations by all groups, a common ranking should be developed based on group consensus.	Hazard map Pens Markers	If time is short, presentation of hazard mapping and hazard ranking can be done at the same time.

TOOL 10 SEASONAL CALENDAR

Vulnerability assessment: **Exposure**

Seasonal calendars can be used in a variety of ways with a range of information. For adaptation planning they are used not just to compare seasonal variation over a year, but also to compare the same season in the past with the present. The calendars help raise awareness of climate change while anchoring it in local reality. The tool can then be used further to highlight climate vulnerability and people's capacity to cope and adapt. Calendars can be completed with different focus groups in the same area so as to assess whether certain poor, social, and gender groups tend to be impacted or respond differently.

Calendars are used to highlight climate vulnerability. They are used to compare climate variables such as rainfall, temperature, or strong winds on a monthly basis now and in the past. They can also record the months when there is insufficient water, or months when people do not sleep at night for fear of floods or landslides. While recording which agricultural activities happen in each month, discussion arises about changes in rainfall that have affected planting and harvesting dates, and therefore yields. Months when there are the greatest incidences of crop or animal pests and diseases can highlight changes over recent years linked with rising temperatures. Observations of changes in the flowering and fruiting of local plants and the emergence of local insects can also do this.

Calendars are used to identify coping strategies and adaptation mechanisms. The calendar can highlight the failure of the winter rains and lead to discussion about what people do when there is no seed to re/plant. Monthly variations in agricultural labor requirements over the year reveal the months of seasonal migration to India, and discussion arises around why there is a need to migrate and whether migration increases or decreases adaptive capacity in the long and short term.

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

Calendars can draw attention to the value of income diversification for increasing adaptation, through recording, for example, months during which people sell vegetables or forest products, or do wage labor. This can lead to discussion about coping strategies and resilience.

The calendar can become a baseline for indicators of adaptive capacity such as food sufficiency, health, income diversification, and access to natural and other resources.

Example

Climate		M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Monsoon rain	Before					****	****	****	****	****			
	Now					**	****	****	****				
Winter rain	Before	****	****										****
	Now		****										
Snowfall	Before	****											****
	Now	**											**
Rice growing season	Before					****	****	****	****	****			
	Now					**	****	****	****				
Potato season	Before	****										****	****
	Now												
Rhododendron flowering	Before				****								
	Now			****									

Changes in practices	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Sufficient drinking water					****	****	****	****	****	****	****	
Sufficient food	****									****	****	****
Need to take loans				****		****	****	****				
Daily labor		****	****		****							
Need to migrate	****	****									****	****
Children cannot attend school						****	****	****				
No access to market						****	****	****				
Work load of women												

[Reproduced: GoN, 2010]

Process	Materials needed	Additional notes
• Divide participants into different groups and give each group an A3 sheet with 12 different columns (one column for each month). Allocate one extra column in the beginning for listing the functions you want to study (e.g. weather phenomena, such as the monsoon, or social phenomena, such as celebrating a festival, etc.). • Ask participants to hang their calendar on the wall and explain to the remaining groups. • The facilitator/trainer will finally draw the important points from the group presentations and mark them in a separate calendar or write them down in bullet points on a flip chart.	A3 sheets Flip charts Pens Markers Tape	

TOOL 11 DISAGGREGATED VULNERABILITY MATRIX

Vulnerability assessment: **Adaptive Capacity**

If the adaptation process is to effectively improve the adaptive capacity of the most poor and climate vulnerable people, then it is essential to identify exactly who those vulnerable people are. They will be of a different age, gender, caste, or ethnicity. They will have different capabilities and need support in strengthening their adaptive capacity. It is important that the wider community really considers who is most vulnerable among them, particularly women and marginalized groups. This tool also helps women and socially marginalized or excluded people describe their vulnerability and state how they believe they can best be helped to increase their resilience. People will begin to realize that the adaptive capacity of the whole community is increased by increasing the capacity of those who are most vulnerable.

Step One: Identifying hazards and hazard effects
If other tools identifying hazards, risks, and effects have been used prior to this, then a list can simply be made down one side of a matrix. This can be marked on the ground or drawn up on paper – the importance is that it be visible to all.

Step Two: Identifying vulnerable groups
Participants then list all the types of vulnerable people in the locality, considering social, gender, economic and physical factors. They should be sure to include those who are landless and recent migrants who may be living without rights on the edge of the community. People who are only seasonally part of the community should also be included, such as seasonal agricultural laborers or secondary forest users who seasonally bring their livestock to graze.

Step Three: Ranking vulnerability
Participants then rank the vulnerability of each social group to each climate hazard effect, remembering to consider both the risk of the hazard happening and the likely scale of the event. They use a score of 4 = very high vulnerability; 3 = high vulnerability; 2 = medium vulnerability; 1 = low vulnerability; 0 = no vulnerability. Groups with high scores become the focus for exploring adaptation options and incorporating activities into the adaptive planning process.

Example

Climate vulnerable people																				
Hazard	**Hazard effect**	**Children**	**Youth**	**Adult**	**Elderly**	**Women**	**Men**	**Very poor**	**Poor**	**Medium**	**Well-off**	**Ill**	**Disabled**	**Single mothers**	**Widows**	**Dalit**	**Janajati**	**Chhetri**	**Brahmin**	**Muslim**
Flood	Rice flooded																			
	Siltation of crop																			
	Land lost																			
	Livestock lost																			
	Home lost																			
	Life lost																			
	Irrigation damaged																			
	Bridge broken																			
Drought	Springs dry																			
	Irrigation fails																			
	Crops die																			
	Fruit fails																			
Land slide	Loss of land																			
	Loss of home																			
	Path damaged																			
	Drinking water supply damaged																			

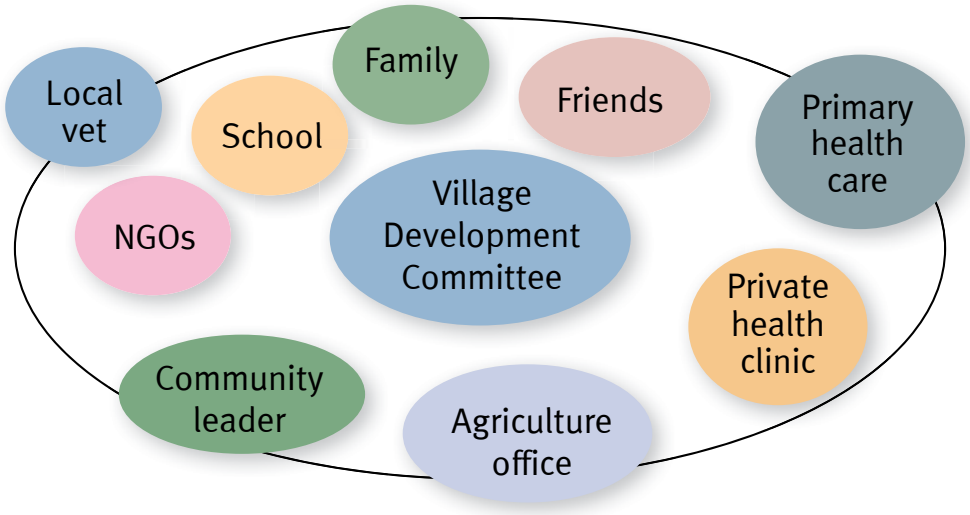
[Reproduced: GoN, 2010]

Process	Materials needed	Additional notes
• Place the results that have come out from the use of Toolkits 6 through 10 on the wall beforehand so that they can be used as the basis for disaggregated vulnerability ranking. • Use a score from 0 to 4 to rank individual hazards according to different parameters such as age, sex, ethnicity, religion etc.	A3 sheets Flip charts Pens Markers Tape	Depending on the context of the training location, the table presented above can be modified by removing or adding parameters.

TOOL 12 VENN DIAGRAM

Vulnerability assessment: **Adaptive Capacity**

A Venn diagram is a toolkit in which circular areas represent groups of institutions located in the area. The circles are used to show relationships between different people/organizations sharing common resources and services. In the context of vulnerability assessment, it can be used to demonstrate which social institutions people look forward to during the times of hardship or difficulty. The size of the circle will show the relative influence of a particular institution. The aim of this tool is to find out which institutions play an important role in building adaptive capacity of the community members during times of climate stresses. The following diagram shows a sample Venn diagram where VDC's adaptive capacity is assessed



Process	Materials needed	Additional notes
• Ask them to brainstorm among themselves what the different institutions are that exist in their community (e.g. temple, NGO, local club, agriculture group, CFUG, etc.). • Ask them to draw circles for each institution, the size of circle depicting the relative influence of that institution in the community. • Ask participants to mention the problem below each circle for which they seek the help of that particular institution. • Bring all sheets together, and ask participants to present the entire group finding on a separate large sheet. Place it on the wall for display and reference for upcoming modules.	A3 sheets Flip charts Pens Markers Tape	• Divide participants into different groups if there are more than 10 participants. • If the participant group is largely heterogeneous, consisting of different ethnic groups, castes, religions, etc., there is the potential for conflict in mapping out the institutions. In such cases, use this toolkit in smaller groups.

TOOL 13 ECOSYSTEM VULNERABILITY ASSESSMENT

Vulnerability assessment: **Sensitivity**

This tool refers to the sensitivity of different ecosystems (forest, agriculture, and water) to climate change and variability. The tool will assess the sensitivity toward species change, quality of the ecosystem, impacts to the ecosystem services, connectivity, etc. This will also highlight the species change in each ecosystem and the context of habitat degradation. Ecosystem vulnerability is assessed by listing hazards and its effects, identifying its impact on elements of each ecosystem and finally ranking them as described below.

Step One: Listing hazards and hazard effects
It is necessary to link the hazard mapping and hazard ranking and list the hazards identified in Toolkits 8 and 9. The factors sensitive to the climatic stress of each ecosystem are listed.

Step Two: Identifying the impacts on each character of the ecosystem
Participants then list all the changes in different aspects of each ecosystem to climatic hazard effect. It is necessary to list the change in forest species (fauna and flora), forest health and quality, and forest ecosystem service, providing specific examples. The same should be done for water and agricultural ecosystems.

Step Three: Ranking vulnerability considering the intensity and scale of the event.
Participants then rank the vulnerability of each character of the ecosystem for each climate hazard. They could be assessed at 1-3 scale where 3 indicates high vulnerability, 2 for medium and 1 for low. Groups with high scores become the focus for exploring adaptation options and incorporating activities into the adaptive planning process.

Example

Forest Ecosystem Vulnerability Assessment

Hazard/risk	Change in vegetation	Change in wild animals	Change in quality	Connectivity	Change in ecosystem services	Total
Landslide/ land cutting	Decline of old species and regeneration of Uttis *(Alnus nepalensis)* (2)	Loss of bird species due to disturbance in their habitats (1)	Loss of trees and dry water sources (2)	Broken connectivity (2)	Decreased availability of fuelwood and fodder (2)	9
Drought/ dryness	1	1	2	1	2	7
Invasive species	2	1	2	2	2	9
Pests and disease						
Total						

Agriculture Ecosystem Vulnerability Assessment

Hazard/risk	Change in agriculture system	Change in faunal species dwelling in agriculture land	Change in production and quality	Change in ecosystem services	Total
Landslide/ land cutting	Loss of khet bari, no practice of agriculture now (3)	Loss of local varieties and appearance of new insects and diseases (1)	Decline in productivity (2)	Shifted the agricultural land (2)	8
Drought/ dryness	3	2	3		7
Invasive species	2	1	2	2	9
Pests and disease					
Total					

Riverine Ecosystem Vulnerability Assessment

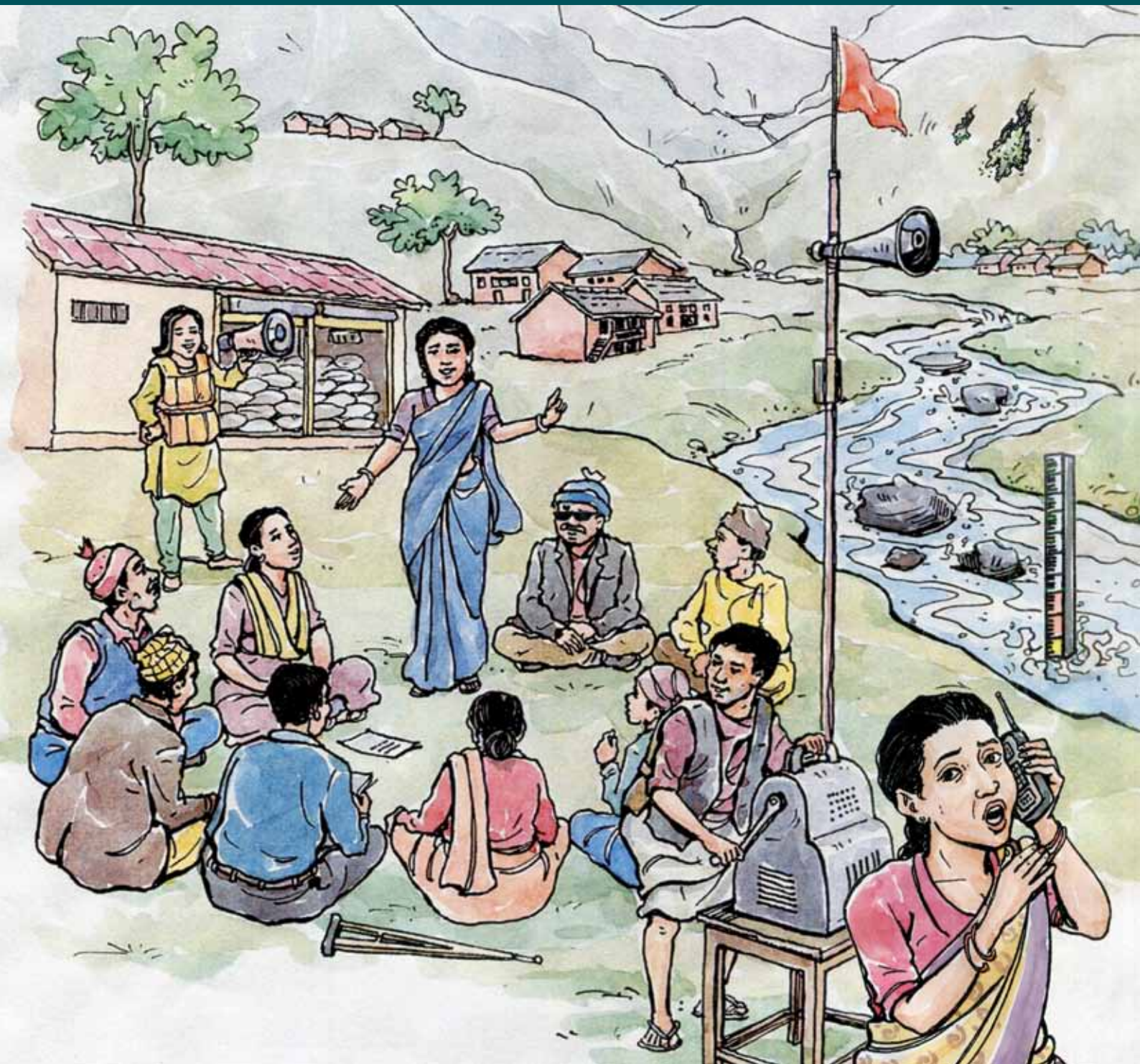
Hazard/risk	Change in vegetation pattern	Change in animal species	Change in water quality	Connectivity	Change in ecosystem services	Total
Landslide/ land cutting	Dryness of water sources (2)	Loss of fish, frog, and crabs (1)	Increasing water scarcity, increased sediments in water (2)	Loss of connectivity (2)	Decline in water availability (2)	9
Drought/ dryness	2	2	2	1	1	8
Invasive species	2	1	1	1	2	7
Pest and disease						
Total						

Source: Hariyo Ban Program Integrated Vulnerability Assessment Guideline, 2013

Process	Materials needed	Additional notes
• Place the results that have come out from the use of Tool 6–10 on the wall beforehand so that they can be used as the basis for assessment. Take the list of hazards from Tool 8 and 9. • Prepare the format for analysis for each ecosystem type. • Use a score from 0 to 3 to rank individual hazards according to different factors or parameters such as species change, ecosystem services change, connectivity change, quality, etc.	A3 sheets Flip charts Pens Markers Tape	Depending on the context of training location, the table presented above can be modified by removing or adding parameters.

MODULE 4

Understanding Community Visioning



MODULE 4 UNDERSTANDING COMMUNITY VISIONING

2 HOURS 15 MINUTES

MODULE OVERVIEW:

This module introduces the basic concept of community visioning includes practical tools. Community visioning is an effective methodology of empowering communities to take the command of their future by deciding how they wish to be in their own words. Participants discuss and develop single vision- an ideal future for their community.

LEARNING OBJECTIVES:

By the end of this module, participants will be able to:

- Understand what community visioning is, along with its objectives
- Learn how to go through a community visioning process
- Learn how to facilitate a community visioning process
- Learn how to use different community visioning toolkits for successfully obtaining to a group vision

MODULE CONTENTS:

1. Theoretical concepts of community visioning and its practical importance
2. Participatory community visioning tools

SESSION PLANS:

The material for this module is covered in two sessions.

SESSION 4.1 COMMUNITY VISIONING FOR HIGH ADAPTIVE CAPACITY AND CLIMATE RESILIENCE

1 HOURS 30 MINUTES

Activity 4.1.1 Mapping a vision for a community with high adaptive capacity and climate resilience

Refer to the key words and concepts defined in Module 3.

Method	Process	Time	Materials
Drawing vision maps Role play	• Use Tool 14 to sketch community visioning. • Use Tool 15 to analyze differences in community visions when they have leaders holding different positions or roles. This activity can be preceded by a 10-minute PowerPoint presentation on basic theoretical concepts of community visioning if the trainer feels that the participants haven't heard about it before.	60 mins + 30 mins	Refer to Tool 13 and 14

SESSION 4.2 SYNTHESIS, PROCESSING AND ANALYSIS OF COMMUNITY VISIONING OUTCOMES 45 MINUTES

Activity 4.2.1 Group discussion, synthesis and analysis

Method	Process	Time	Materials
Participatory tools	• Participants discuss visions made from the use of Tool 14 and observations from role play. - What are the similarities? - What are the differences and why did they come up? What is the significance of such differences in a community planning process? - How can differences between group visions be dealt with? • All groups present their final maps after going through the above thought process and doing a final analysis. • Record the groups' responses and key visions from this module.	45 mins	Final maps from Activity 4.1.1 Flip charts Pens Markers

Presentation materials:

Slide 1: What is community visioning?

- Community visioning is an effective tool to empower communities to take command of their future because they get to decide for themselves what their future be like.
- Participants discuss and develop a single vision – an ideal future – for the entire community.
- Visioning creates a forum where everyone can express their hopes, share their expectations, and come to a consensus.

The participatory process encourages a positive, inclusive and collaborative atmosphere.

Slide 2: Scope

- The community visioning process builds on the Assessment that was carried out during Steps 1–3.
- The vision can be created for a single community or village, or at the scale of operation.
- Or for a whole watershed area or landscape.
- It is created with the participation of the people living in the area and those who make decisions about the use of resources in the area.

Slide 3: Community visioning consists of 5 steps:

- Step I – Explaining the community visioning exercise
- Step II – Creating the vision
- Step III – Brainstorming, presenting, discussing, and analyzing individual visions and dreams in 3 community focus groups
- Step IV – Combining individual visions into one collective community vision
- Step V – Joint community reflection

Slide 4:
TEMPLATE for Community Vision Statement (2)

		Ecosystem health	Human well-being				
	1	2	3	4	5	6	7
Domains of change (NOTE- Selected ones from Nepal NAPA report)	Climate induced disasters	Forest & biodive-rsity/eco-systems	Agriculture & Food Security	Public Health	Human Settlements & Infrastructure	Water & Energy	Gender, Liveli-hoods & Govern-ance
Community Vision Statements (list the individual community Vision Statements under each of the Domains where they best fit)							

- When the individual Vision Statements are added here, together they become one Vision for the whole community!
- This Vision constitute a picture or statement of what the community would like their community and lives to look like 15-20 years out in the future!
- This is what all activities in the CAPA must help secure!

Source: Hariyo Ban Program's TOT handouts, 2011

Group Exercise 4.1: Exploring linkages between context change and impact

CONTEXT CHANGES (Changes in climatic and non-climatic stressors)		IMPACT ON ECOSYSTEM		IMPACT ON HUMAN WELL-BEING				
		NEPAL NAPA DOMAINS OF CHANGE FROM COMMUNITY VISION						
		1	2	3	4	5	6	7
		Climate-induced Disasters	**Forest & biodiversity/ Ecosystems**	**Agriculture & Food Security**	**Public Health**	**Human Settlements & Infrastructure**	**Water & Energy**	**Gender, Livelihoods & Governance**
Selected Individual Vision Statement (1 individual statement per Community Vision Domain of Change)		Write the selected individual statement here	Write the selected individual statement here	Write the selected individual statement here	Write the selected individual statement here	Write the selected individual statement here	Write the selected individual statement here	Write the selected individual statement here
	Scenario/ What will the effects be?	XXX	XXX	XXX	XXX	XXX	XXX	XXX
I. Climate change parameter/driver of vulnerability								
Temperature	Change in mean temperature in MONSOON	Write how the change in mean temp in **Monsoon** will impact the selected individual statement						
	Change in mean temperature in WINTER	Write how the change in mean temp in Winter will impact the selected statement	Etc.	Etc.				
Rainfall	Change in rainfall							
II. Non-climatic parameter/driver of vulnerability								
Political situation	Change in government – new political party in power							
Market fluctuations	Increase in price of rice							

Source: Hariyo Ban Program's TOT handouts, 2011.

TOOLS AND APPROACHES:

TOOL 14 VISION DEVELOPMENT

This is only a sample toolkit to give you an idea of how to go about visioning a climate resilient community. Since vulnerability to climate change isn't always reduced by climate interventions, an additional row has been created in the table below to allow participants to envision anything independently that directly or indirectly helps in attaining community and ecosystem resilience.

Vulnerabilities identified in Module 3	Community vision to address those vulnerabilities
(1)	(1) (i)
	(1) (ii)
	(1) (iii)
(2)	(2) (i)
	(2) (ii)
	(2) (iii)
(3)	(3) (i)
	(3) (ii)
	(3) (iii)
(4)	(4) (i)
	(4) (ii)
	(4) (iii)

Process	Materials needed	Additional notes
• Participants are first asked to envision potential solutions to address the vulnerabilities that have been identified earlier. The table above can be used as a sample for brainstorming. • Once participants come up with adaptation options, they are asked to map those adaptation actions in order to address the vulnerabilities.	Vulnerability map, multiple copies Livelihood resources map, multiple copies Markers Pens	

TOOL 15 ROLE PLAY

This tool has been designed to give the participants an opportunity to take different decision making positions in their community. This will give them a closer insight into whether different groups or people in the community have different visions and whether the vision developed by one person or group is agreeable to the rest.
The potential roles can be:
(i) Community leader
(ii) Head of women's group
(iii) Head of a local cooperative group
(iii) Principal of a local school

This tool is just one way to illustrate how community visions differ when different groups/ persons are acting as lead decision makers. This will help participants understand why collective group thinking and community discussions are important.

Process	Materials needed	Additional notes
• Divide participants into groups with a balanced representation of ethnicity, religion, caste, and sex. • In each group, assign one person as lead decision maker (in one of the roles listed above) and ask the group to use community vision prepared with tool 14. • Ask participants to try their best to convince the lead decision maker to incorporate their visions into the final community vision.	Vulnerability map, multiple copies Livelihood resources map, multiple copies Markers Pens Flip charts	

ADDITIONAL RESOURCES:

- *LAPA Manual*, Ministry of Science, Technology and Environment, 2011.
- CARE International in Vietnam: http://www.careclimatechange.org/files/CARE_docs/CARE_VN_Visioning_Document.pdf

MODULE 5

Understanding Participatory Scenario Planning

MODULE 5 UNDERSTANDING PARTICIPATORY SCENARIO PLANNING

3 HOURS 45 MINUTES

MODULE OVERVIEW:

This module builds on the foundation for future planning from earlier module (Community Visioning) and includes expert presentation, scenario planning exercise, prioritization and finalization of adaptation plan.

LEARNING OBJECTIVES:

By the end of this module, participants will be able to:

- Understand what participatory scenario planning is and how it is done
- Understand the fundamentals of adaptation planning
- Learn how long-term climate resilience planning is different from adaptation-only planning
- Familiarize with different kinds of plans and planning processes including development plans, sector-specific plans, and plans developed considering climate and environment
- Learn how to prioritize activities based on short- and long-term needs of the community through the use of practical prioritization tools

MODULE CONTENTS:

1. Participatory scenario planning
2. Climate adaptation planning
3. Prioritization methods in the context of climate change
4. Comparing and contrasting different kinds of plans and planning processes (development, sectoral, adaptive, resilience)
5. Integration of climate foresights into local and sectoral planning

KEY WORDS AND CONCEPTS:

- **Climate resilient community:** One that takes proactive steps to prepare for climate change impacts, for example by reducing its vulnerabilities and risks.

- **Climate scenario:** A plausible and often simplified representation of the future climate based on an internally consistent set of climatological relationships and assumptions of radiative forcing, typically constructed for explicit use as input to climate change impact models. *A climate change scenario* is the difference between a climate scenario and the current climate (IPCC 2007).

- **Mainstreaming:** Mainstreaming refers to the integration of adaptation objectives, strategies, policies, measures, or operations such that they become part of the national and regional development policies, processes, and budgets at all levels and stages. *Mainstreaming* is used interchangeably with *integration* (UNDP 2004).

- **Priority action:** An adaptation action that has been prioritized for implementation, corresponding to one or several climate change risks.

- **Resilience:** The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change (IPCC 2007).

- **Scenario:** A plausible and often simplified description of how the future may develop based on a coherent and internally consistent set of assumptions about driving forces and key relationships. Scenarios may be derived from projections, but are often based additional information from other sources, sometimes combined with a "narrative storyline" (IPCC 2007).

SESSION PLANS:

The material for this module is covered in two sessions.

SESSION 5.1 CLIMATE CHANGE SCENARIO DEVELOPMENT AND SCENARIO-BASED PLANNING 1 HOURS

Activity 5.1.1 PowerPoint presentation on fundamentals of scenario planning

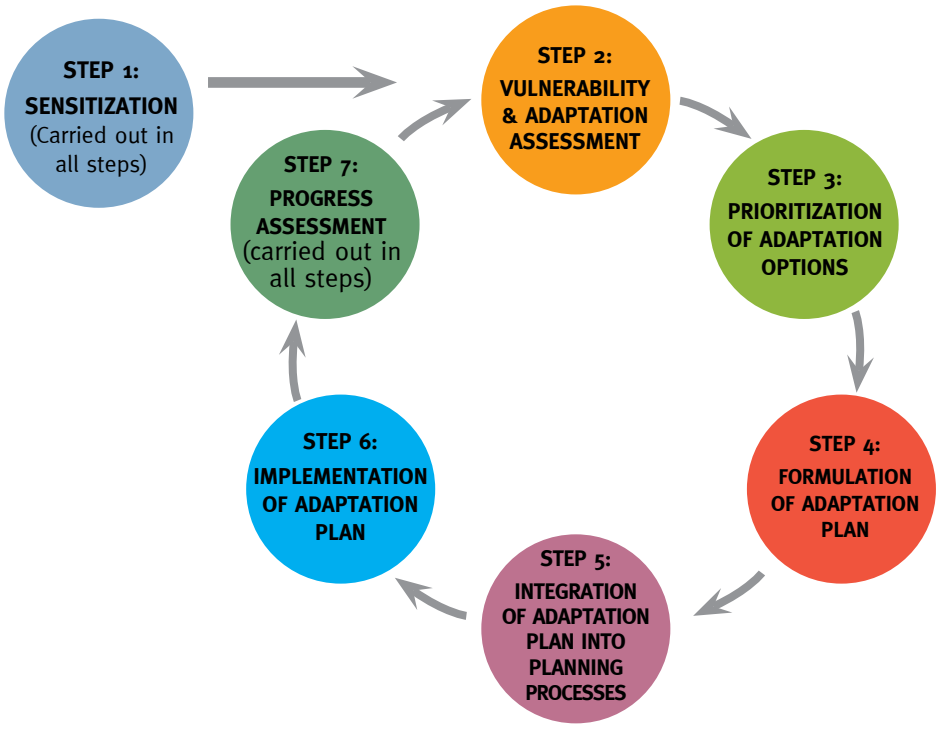
Developing probable future scenarios is absolutely essential in planning long-term climate resilience because without having those scenarios in the first place, it is almost impossible to make plans for the future. In such scenarios, one has to be able to take into account a broad range of future possibilities. Refer to the key words and concepts defined above.

Method	Process	Time	Materials
Presentation	• Explain how resilience is linked to the vulnerability assessment and adaptation planning. Clarify on the tools that we have used add some tools on resilience planning. Relate this with local adaptation planning process. • Use a broad range of scenarios to give an idea of different possibilities. • Explain the importance of science-based scenario planning, even though most of our decisions are guided by social and cultural practices.	15 mins	Laptop Multimedia projector Handout 1, 2, and 3

Activity 5.1.2 Participatory method of scenario development

Method	Process	Time	Materials
Scenarios	Use Tool 16 to teach participants how to realize multiple scenarios practically. Refer to the tool for further guidance.	45 mins	Refer to Tool 16

Local Adaptation Planning Process



SESSION 5.2 PRIORITIZATION AND CLIMATE ADAPTATION PLANNING

Activity 5.2.1 Presentation on and explanation of climate resilience framework

It is very important to let participants know the basic elements of a climate resilience framework. This activity uses adaptation, sustainable development, vulnerability, vulnerability as integrated concepts within the broader aspects of climate resilience.

Method	Process	Time	Materials
Presentation	Use Handout 4 to explain the climate resilience framework adopted by the National Planning Commission and how climate resilience planning covers a broader range of issues than just adaptive planning.	30 mins	Laptop Multimedia projector Flip charts Tape Markers

Activity 5.2.2 Participatory adaptation and climate resilience planning exercise

Method	Process	Time	Materials
Toolkits	Use Tool 17 Coping Strategy support to come up with detailed adaptation and climate resilient activities and plans.	1 hour	Refer to Tool 17

Activity 5.2.3 Prioritization and finalization of climate adaptation plan

Method	Process	Time	Materials
Tools Group discussion	• Use Tool 18 to prioritize the adaptation and climate adaptation activities. • Use a group discussion to further prioritize those activities if there were any disagreements during the prioritization process. • Put a list of final climate resilient activities on the wall and allow participants to think it over once more before it is considered final. 🔔 Prioritization and plan finalization are crucial steps. The facilitators should make sure to provide all forms of technical and intellectual support throughout this activity.	1 hour 15 mins	Refer to Tool 18

TOOLS AND APPROACHES:

TOOL 16 SCENARIO PLANING

Developing probable future scenarios is absolutely essential in planning long-term climate resilience because without having those scenarios in the first place, it is almost impossible to make plans for the future especially in the context of uncertainty surrounding climate change. Such scenarios should be able to take into account a broad range of future possibilities.

The following table can be used as a sample.

Vulnerabilities	Forecast	Highly likely (H) Moderately likely (M) Less likely (L)	Problems resulting

The trainer should be able to decide what time horizon should be taken for developing such scenarios. It is usually over the next 20–30 years. Long-term climate resilience can't be planned if we are only thinking about the next few years.

Process	Materials needed	Additional notes
Story telling • Divide participants into multiple small groups and ask them to develop a story about the likely future of their community vision developed in Module 4. There should be only one compiled story from each group. • Ask participants to consider the results from all tool that have been used so far (make sure they are hung on the wall prior to this activity). **Scenario Table** • Based on the story developed earlier, ask participants to fill in the table above. Participants can be reshuffled into separate groups this time. • Ask participants to use the results from scientific modelling, if available (the trainer should explain the meaning of those models beforehand).	Results of tools from Module 3 onward hung on wall Community map, multiple copies Flip charts Scientific modelling, if available	The Scenario Table can be printed in multiple copies as a separate handout.

TOOL 17 COPING STRATEGY SUPPORT TABLE

This tool should be used after getting the results from the use of Tool 16. This tool is adjusted to the vulnerability and coping strategy support. Listing the coping and adaptation strategies after the identification of vulnerabilities makes the process easier. Further, mapping sources of support to those vulnerabilities gives an idea of effective planning for any sort of adaptation and climate resilience activity.

🔔 Use the results obtained from the use of various toolkits from Module 3 (especially livelihood profiling).

Vulnerabilities indentified			**Coping strategies/ activities + Effectiveness (High-H, Moderate-M or Low-L)**	**Support Y/N**	**Kind of support available and from whom**	**Further activities for long term adaptation and climate resilience**	**Potential support Y/N**	**Potential sources of support/ Kinds of resources needed if there is no current support**
Past/ present		**From scenario planning**						
CC related	**Non-CC related**							
Soil erosion			None	N		Tree line, physical barrier, contour farming	N	District Forest Office, District Agri. Office
		Crop infestation by new diseases				Pest controlling techniques, pest resistant crops	N	No idea
	Lack of market access for local product		None	N		Market promotion	No idea	No idea

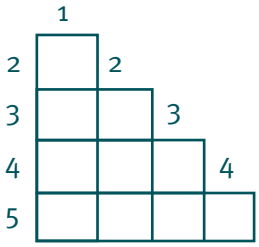
Process	**Materials needed**	**Additional notes**
• Provide participants with a handout of the table above. • Separate them into groups if they find individual exercise tedious. • If they have been divided into groups, ask them to come up with a final compiled table.	Results from the use of Tool 16 hung on the wall Community map (multiple copies) Flip charts	The Table can be printed in multiple copies as a separate handout.

TOOL 18 PAIRWISE RANKING

Pairwise ranking is a powerful tool of ranking or prioritizing a list of activities prepared by participants. Pairwise ranking can be done between a set of similar or entirely different activities. For example, in the case of climate change adaptation or climate resilience planning, there might be a list of several activities recommended to control flooding. The different ways of flood control can be ranked. Similarly, there might be a list of mixed activities related to controlling floods, landslides, deforestation, etc. In this case, a ranking can be done to choose activities that are most immediately needed by the community.

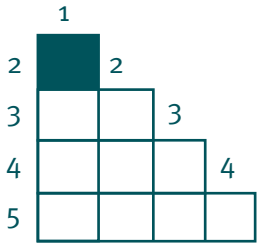
Whether you are choosing between a similar set of activities or not, the method will be as follows.

Construct a pairwise matrix.
Each box in the matrix represents the intersection (or pairing) of two items. If your list has five items, the pairwise matrix would look like this, with the top box representing idea 1 paired with idea 2.

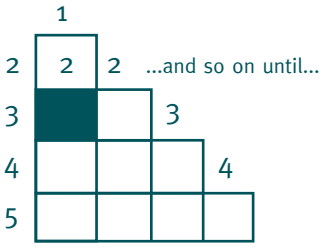


Rank each pair.
For each pair, have the group (using a consensus-oriented discussion) determine which of the two ideas is preferred. Then for each pair write the number of the preferable idea in the appropriate box. Repeat this process until the matrix is filled.

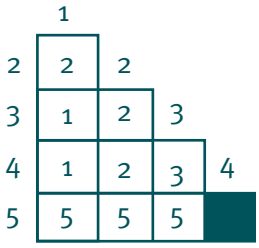
1 and 2 compared: 2 is better.



1 and 3 compared: 1 is better.



4 and 5 compared: 5 is better.



Count the number of times each alternative appears in the matrix.
Rank all items. Rank the alternatives by the total number of times they appear in the matrix. To break a tie (where two ideas appear the same number of times), look at the box in which those two ideas are compared. The idea appearing in that box receives the higher ranking.

Alternative 5 appears 4 times in the matrix.

Alternative	1	2	3	4	
Count	2	3	1	0	
Rank					

Alternative 5 ranks 1st overall.

Alternative	1	2	3	4	
Count	2	3	1	0	
Rank	3rd	2nd	4th	5th	

Process	Materials needed	Additional notes
• List all the adaptation and climate adaptation activities from the use of Tool 16 on a flip chart and hang it on the wall. • Ask participants to form the pairwise matrix. • Ask them to do the ranking keeping in mind gender and social inclusion.	Flip charts Pens Markers	If participants get confused, draw a sample pairwise ranking table on a chart, listing some of the activities that the participants have come up with.

HANDOUTS

HANDOUT 1 SCENARIO PLANNING

Envisioning future climate scenarios (Refer to LAPA MANUAL: TOOL 9)
Given the uncertainty of climate change effects on a particular locality, it is useful to envision the range of effects that may be experienced over different time scales. People typically envision the future by extending their own past experiences forward. However, with climate change, conditions may evolve in ways that have never been experienced in that locality. Thus it is important to consider a range of situations that may occur, based on both scientific and local information.

This tool assists local communities, decision-makers, and service providers in understanding the variability of climate change and in planning for an uncertain future. It helps them assess changing vulnerability to current and future climate change effects. It helps poor and vulnerable people understand the effects and impacts that they may experience, so that they can better contribute to local adaptive plan development.

Step One: Deciding time horizons
The process is guided by a facilitator who has a clear understanding of what is known about climate change and the areas where projections are highly uncertain or cannot be made. Participants clarify time horizons. It is suggested that they consider changes and impacts over the short-term (up to 5 or 10 years), intermediate-term (up to 20 years) and long-term (up to 50 years).

Step Two: Exploring possible changes in climate
Changes can be considered systematically using a table with four columns for time horizons, and rows relating to key climate conditions in different seasons. The factors that are best known and most easily predicted, such as temperature, are listed first. Areas where uncertainty is high, such as precipitation, changes in storm intensity, or the frequency of floods, follow. Each cell of the table is filled in with information from both scientific data relevant to the area and local perceptions.

Example

Climate parameters	Current	Short-term (10 yr)	Intermediate (20 yr)	Long-term (50 yr)
Winter				
Temperature	Current at location	+2°C average +3°C peak	+3°C average +4°C peak	+4°C average +5°C peak
Snow line	Current at location	+500m average and melts faster	+1000m average and melts faster	+1500m average and melts faster
Storm frequency	Current at location	A bit more uncertain than now	Much more uncertain than now	Completely uncertain
Rainfall	Current at location	More variable +-?	Very variable?	Highly uncertain
Summer				
Temperature	Current at location	+2°C average +5°C peak	+3°C average +7°C peak	+4°C average +10°C peak
Snow line	Current at location	+1000m average and melts faster	+1500m average snow disappearing from peaks	+3000m average no snow visible
Storm frequency	Current at location	Hot dust and thermal storms increasing	Many hot dust storms now occurring, intense cloud bursts common	Very windy and turbulent on hot days. Very intense thermal storms
Rainfall	Current at location	Very variable	Highly uncertain	Highly uncertain

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

Step Four: Considering impacts on communities and systems
Participants then consider the possible impact of each of these scenarios on local people including men and women of all ages, caste, and ethnicity, their means of livelihood, their environment, the social systems, and the infrastructure/services on which they depend. Use is made of "what if" questions: "What if the soil moisture significantly decreases over the next five years?" It can be helpful to draw pictures or maps to illustrate impacts and facilitate discussion. Such discussion should also identify areas where impacts on one system could affect another. For example, if electricity generation is vulnerable to floods, then problems can also be expected for communication systems or agriculture that depends on pumped water. This step identifies impacts to be addressed and the people who would most need support in each scenario. These become the focus for discussions around options for adaptation planning at community or district level.

Example

Climate parameter	Scenario	Effects	Impacts on local communities, environments and services*	Who is most vulnerable (disaggregated into men and women of all ages and caste/ ethnic groups)
Monsoon rainfall	Low volume	Reduced soil moisture, dry spells, low stream/ river flow	Crops fail, people hungry. Springs dry. Forest fires. Micro-hydro fails.	Single women Forest dwellers Students
	Same volume, more erratic, high intensity	Dry spells, greater run-off, reduced infiltration, floods, river scouring, landslides	Crops under stress, at risk of drying out and vulnerable to pests and disease. Soil erosion. Loss of land and other assets. Loss of life. Damaged infrastructure.	Landless migrants living by the river Paddy owners Ill or disabled
	Reduced timeframe (delayed onset and/or early finish)	Shortened growing season	Rice seedlings over-mature in nursery beds, delayed planting, crops do not mature, shortage of rice in market.	Landed people Agricultural laborers Poor households
	High volume	Flooding, river scouring, landslides, increased soil moisture	Water-logging of crops, crops susceptible to rotting and disease, crops unable to ripen, prices increase. Damaged infrastructures. Homes/assets destroyed. Better post-monsoon crops.	Paddy owners Majhis living beside river Chepangs living in landslide prone hillsides

* Separate columns can be created for impacts on food security, infrastructure, sectors, or services.

Source: *LAPA Manual*, Ministry of Science, Technology and Environment, 2011.

HANDOUT 2 SAMPLE ADAPTATION PLAN

Do not hang on the wall if it creates a bias when participants are developing their own adaptation plans. It should be used only as a reference.

Local Adaptation Planning:
TEMPLATE for Local Adaptation Plan

COMMUNITY ADAPTATION PLAN-TEMPLATE

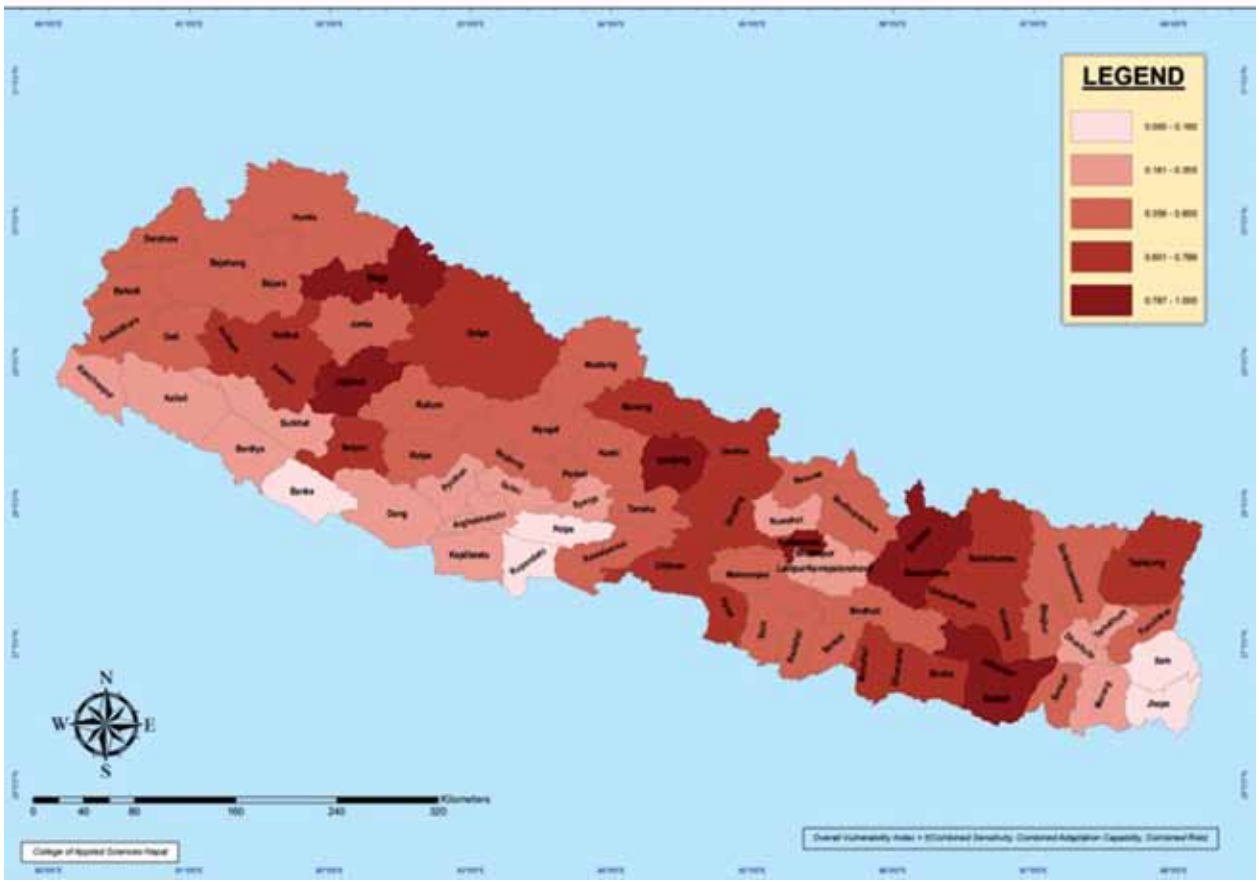
WHAT action?	Framework connection		WHERE to implement?	WHO will implement?	WHEN to implement TIMING			HOW to implement?	WHAT will it cost?	WHO will pay (Donor)?
	NAPA Domain	CARE Adaptation Framework								
Activities	Which of the 7 categories?	Which of the 5 categories?	Location		Short term	Medium term	Long term	Methods	Amount of money	Donor

Source: Developed by Tine Rossing and CARE Nepal CHULI program

HANDOUT 3 NATIONAL ADAPTATION PROGRAM OF ACTION

If participants are relatively literate, you can provide a copy of NAPA document for their reference.

OVERALL VULNERABILITY MAP OF NEPAL

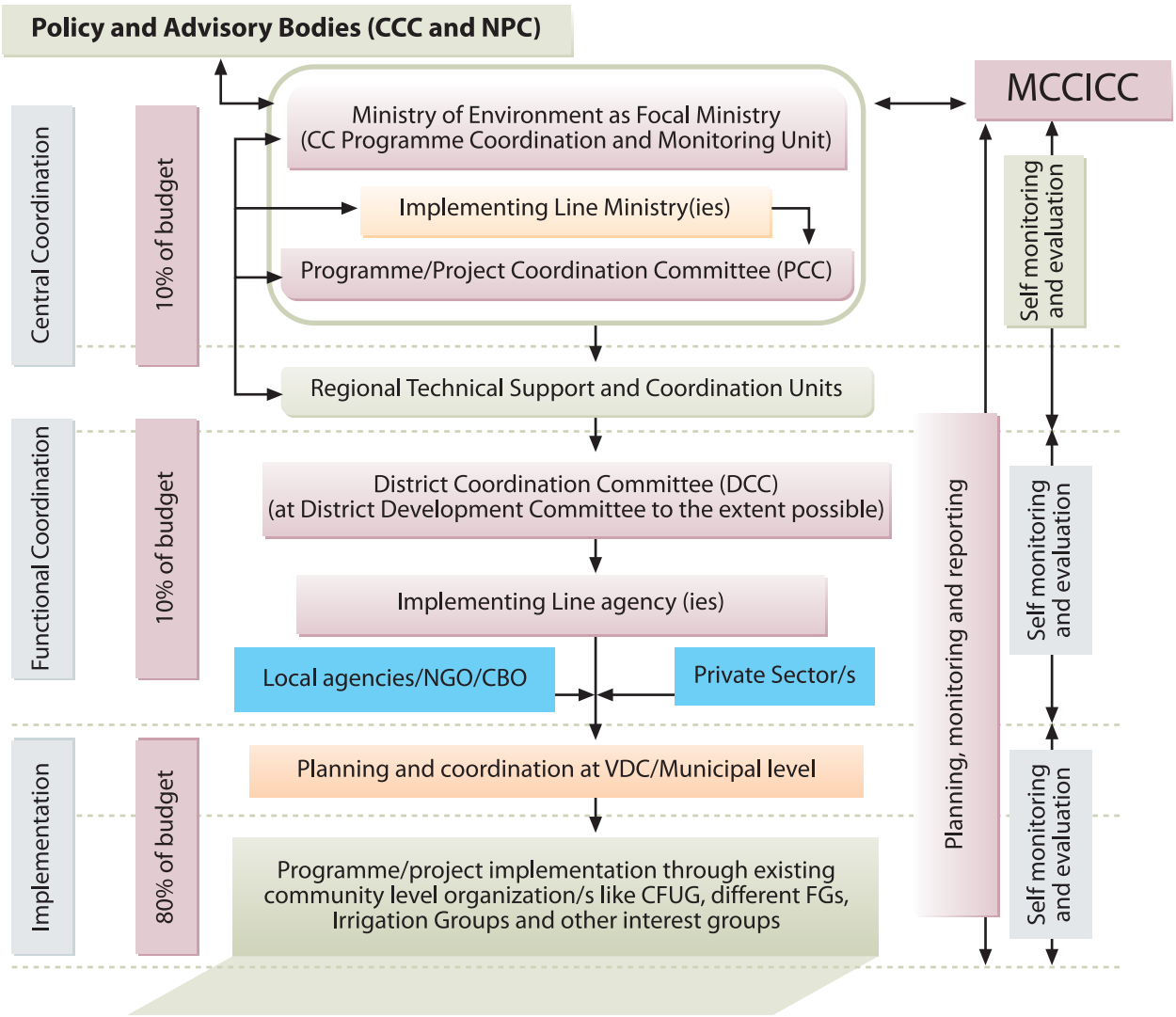


Combined Vulnerability	Districts
Very High (0.787-1.000)	Kathmandu, Ramechhap, Udayapur, Lamjung, Mugu, Bhaktapur, Dolakha, Saptari, Jajarkot
High (0.601-0.786)	Mahottari, Dhading, Taplejung, Siraha, Gorkha, Solukhumbu, Chitwan, Okhaldhunga, Achham, Manang, Dolpa, Kalikot, Khotang, Dhanusha, Dailekh, Parsa, Salyan
Moderate (0.356-0.600)	Sankhuwasabha, Baglung, Sindhuli, Bhojpur, Jumla, Mustang, Rolpa, Bajahang, Rukum, Rautahat, Panchthar, Parbat, Dadeldhura, Sunsari, Doti, Tanahu, Makwanpur, Myagdi, Humla, Bajura, Baitadi, Bara, Rasuwa, Nawalparasi, Sarlahi, Sindhupalchok, Darchula, Kaski
Low (0.181-0.355)	Nuwakot, Dhankuta, Kanchanpur, Bardiya, Kapilbastu, Terhathum, Gulmi, Pyuthan, Surkhet, Arghakhanchi, Morang, Dang, Lalitpur, Kailali, Syanja, Kavrepalanchowk
Very Low (0.000-0.180)	Ilam, Jhapa, Banke, Palpa, Rupandehi

NAPA-Identified Priority Profiles

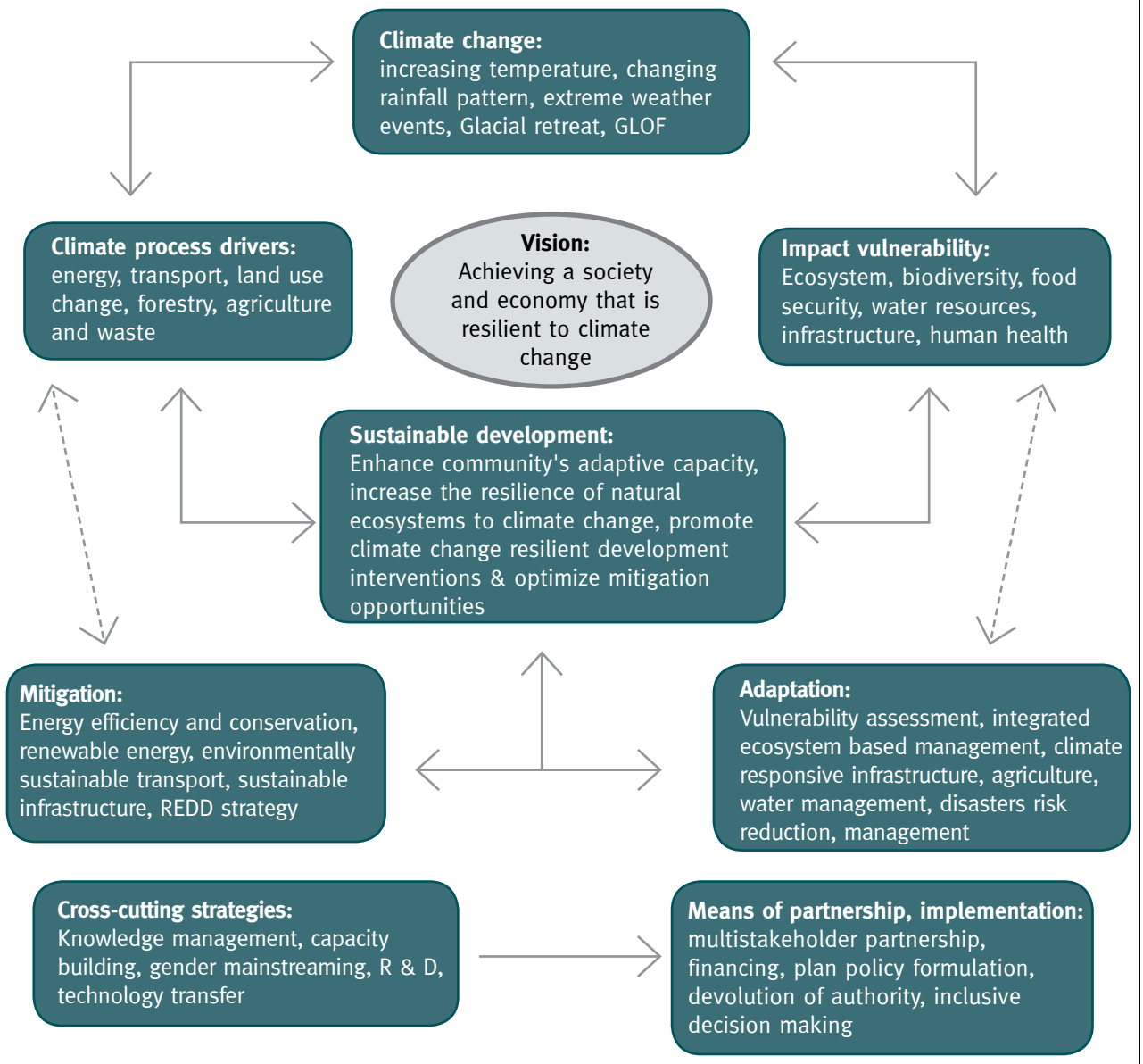
1. Increasing Community Based Adaptation through Integrated Management of Agriculture, Water, Forest and Biodiversity
2. Building Adaptive Capacity of Vulnerable Communities through Climate Resilient Agricultural Development
3. Community Based Disaster Management for Facilitating Climate Adaptation
4. GLOF Monitoring and Disaster Risk Reduction
5. Forest and Ecosystem Management for Supporting Climate Led Adaptation Innovations
6. Adapting to Climate Challenges in Public Health
7. Ecosystem Management for Climate Adaptation
8. Empowering Vulnerable Communities through Sustainable Management of Water Resource and Clean Energy Supply
9. Promoting Climate Smart Urban Settlement

NAPA Identified service delivery mechanism



Acronyms: CCC: Climate Change Council; NPC: National Planning Commission; MCCICC: Multi-stakeholder Climate Change Initiatives Coordination Committee; CC: Climate change; CFUG: Community Forestry User Group, FG: Farmers' groups

HANDOUT 4 CLIMATE RESILIENCE PLANNING FRAMEWORK



[Source: NPC, 2011; p.25]

ADDITIONAL RESOURCES:

- LAPA Manual, Ministry of Science, Technology and Environment, 2012.
- Climate Resilient Planning (working document), Government of Nepal, National Planning Commission, 2011.

MODULE 6

Understanding Integrated Adaptation Planning and Local Planning Process

MODULE 6 UNDERSTANDING INTEGRATED ADAPTATION PLANNING AND LOCAL PLANNING PROCESS

8 HOURS

MODULE OVERVIEW:

This module shows how climate adaptation planning can be successfully integrated into local and sectoral planning, using the LAPA framework and other community based adaptation models. It also gives a quick overview of a monitoring and evaluation system for climate adaptation and resilience projects.

LEARNING OBJECTIVES:

By the end of this module, participants will be able to:

- Understand the meaning of local and sectoral planning in terms of services and to what extent they complement or supplement each other
- Understand the concept of integrated or mainstreamed planning
- Understand the components that have to be considered as a part of an integrated or mainstreamed plan
- Understand the importance of integrating gender and social inclusion in any integrated climate adaptation planning
- Use the basic concept of monitoring and evaluation by developing a set of indicators themselves
- Recognize core tools commonly used in monitoring and evaluation

MODULE CONTENTS:

1. Local and sectoral planning
2. Mainstreamed or integrated climate adaptation planning
3. Monitoring and evaluation of climate adaptation/resilience projects
4. Minimum conditions and performance measurement system of the Government of Nepal

KEY WORDS AND CONCEPTS:

- **Mainstreaming:** Mainstreaming refers to the integration of adaptation objectives, strategies, policies, measures, or operations such that they become part of the national and regional development policies, processes, and budgets at all levels and stages. Mainstreaming is used interchangeably with integration (UNDP 2004).

- **Integrated climate change adaptation:** Integrating adaptation into development projects is the process of identifying climate-related risks and adjusting activities and approaches to reduce these risks. This is different from a targeted community-based adaptation project, where the explicit goal is to build vulnerable people's resilience to climate change (CARE 2010).

By integrating adaptation into our projects, we can:

- Minimise the likelihood of climate change undermining or negating the effectiveness and sustainability of development interventions. This process is sometimes called “climate-proofing.”
- Ensure that activities contribute to people’s adaptive capacity, when possible, and don’t inadvertently increase their vulnerability to climate change.

- **Monitoring versus Evaluation:** Because the two terms are so often grouped together, people often confuse the two or think they are the same thing, but they are not (CDEMA, pp 51–52).
  Monitoring takes place on a more or less continuous basis and identifies:
  - Whether and what progress is being made toward achieving the objectives
  - Whether activities/projects/programs are being carried out as planned in terms of use of resources (money, people, equipment) and within the planned timeframe
  - What external or internal circumstances have changed in ways that were unexpected
  - What is being learned to improve effectiveness and efficiency

Evaluation takes place at set times, such as the mid-point or end of a project or activity or when a key event has taken place, such as a disaster. Evaluation identifies:

- Whether the desired results have been achieved or if they are in the process of being achieved
- Whether unanticipated (positive or negative) results have been achieved
- What can be learned from this experience
- What we should do next (e.g. follow-up projects)

Monitoring focuses mainly on outputs whereas evaluation focuses mainly on outcomes.

- **Results**: Refers to all the ways we can show that our project has achieved or contributed to achieving the goals and objectives that were set (CDEMA, p 52). Results also include effects or impacts from our project that we did not expect. In monitoring and evaluation, results are normally subdivided into:
  Outputs: which are usually short- or medium-term measurable results that you can say occurred as a direct result of your actions. Examples would be:
  - 20 people from Ranikhola trained in monitoring and evaluation
  - A monitoring and evaluation plan developed for the Ranikhola community
  - A new Check dam wall erected at the Ranikhola community forest
  - A proposal developed and funded for Phase 2 of the implementation of the community action plan

- **Outcomes:** which are usually observable longer-term changes, often relating to changes in people's attitudes, behavior, or actions. You can only say that your project contributed to the outcome as there will be many other factors that have contributed to or affected the outcome as well. Examples would be:
  - Fishermen have adopted more sustainable fishing methods as a result of their increased understanding of the impacts of climate change on their livelihoods
  - Parents in Ranikola are less anxious about the future for their children and grandchildren as a result of the community preparedness and adaptation plans
  - More children at the Ranikhola School are willing to participate in the Check dam monitoring program
  - Community organizations are now including climate change education in their youth programs

- **Effectiveness versus efficiency:** Monitoring seeks to measure and contribute to learning about how to improve both efficiency and effectiveness (CDEMA pp 52–53). Effectiveness relates mainly to examining whether the project is achieving the desired results and asks the question, "Are we doing the right thing?" Efficiency relates to whether the project is making the best possible use of the various resources at its disposal and asks the question "Are we doing things right?" For example, if your goal is to cook a wonderful meal for 30 people at a cost of NPR 100 ($1) each, you would be effective if you fed 30 people and they enjoyed the meal, but you would only be efficient if the cost stayed under NPR 100($1) and you provided the meal at the right time.

- **Accountability versus learning:** Monitoring and evaluation serves two very useful purposes – accountability and learning. But it can often be difficult to find a good balance between them. For example, accountability places emphasis on "proving" to your partners (donors, support agencies) and beneficiaries (people who benefit from your programs) that you are achieving the desired results and using your resources wisely. This means that you spend a lot of time reporting on how you are doing in comparison with what you said you would do at the beginning of the project, with a strong emphasis on the outputs (and of course, in the hope that they will fund you again). Learning is critical to the success of both the current project and all the future ones. It means examining what went well and what you would do differently in future but it may not always seem strategic to report this to a donor or beneficiary for fear they think you are not competent. Fortunately, there is a gradual shift to recognizing that learning is critical to all effective development processes (CDEMA, p 53).

SESSION PLANS:

The material for this module is covered in four sessions.

SESSION 6.1 LOCAL AND SECTORAL PLANNING PROCESSES

45 MINUTES

Activity 6.1.1 PowerPoint presentation on local and sectoral planning system of Nepal

Method	Process	Time	Materials
Presentation Handout	Use PowerPoint presentation along with Handout 5 and 6 to explain the following concepts: - Local and sectoral planning of Government of Nepal - Difference between VDC/DDC planning and climate adaptation planning	30 mins	Multimedia projector Laptop

Activity 6.1.2 Case study of LAPA's 7-step framework

Method	Process	Time	Materials
Graphical presentation	Place LAPA's 7 steps of preparation (activity 5.1.2) on the wall and discuss how those steps are connected to the local and sectoral planning of the GoN. 🔔 Session 6.2 will explain in detail the areas of integration. Use this activity to give only a general background for the upcoming session	15 mins	Flip chart Markers Pointing stick

SESSION 6.2 KEY AREAS FOR INTEGRATION INTO LOCAL DEVELOPMENT AND SECTORAL PLANNING

2 HOURS

This session will help participants understand key areas for integration into local development and sectoral planning from local, district, regional, and national levels.

Activity 6.2.1 Teasing presentation on areas of integration of climate adaptation plans

Method	Process	Time	Materials
Teaser Hand out	• Use PowerPoint presentation as a teaser to explain: - What an adaptation/resilience plan looks like (🔔 The trainer can use the earlier adaptation/resilience plans developed by the participants) - What a VDC /DDC plan looks like (🔔 The trainer can bring a copy of the last VDC plan from the VDC office) • Then ask participants to think about how those adaptation/resilience plans fit into their annual VDC/DDC plans until the next activity is started.	30 mins	Multimedia projector Laptop Flip chart

Activity 6.2.2 Brainstorming key areas of integration

Method	Process	Time	Materials
Brainstorming	• Place on the wall: - A sample of participants' adaptation/resilience plans - Large printed copies of Handouts 5 and 6 • Ask participants to brainstorm for 30 minutes to come up with ideas on how their own adaptation/resilience plans can be integrated into their annual VDC/DDC plans • Place Handout 7 on the wall as a reference to give the participants an idea about how climate change impacts are directly connected to different development sectors. • Ask some of the participants to present their ideas of integration. 🔔 End this activity here as the next session will continue with a detailed explanation of integration and mainstreaming. The participants will get a chance to reflect on their understanding of integration in the next session.	1 hour 30 mins	Flip chart Handouts Markers Pens

SESSION 6.3 MAINSTREAMING FOR CLIMATE ADAPTATION

2 HOURS 30 MINUTES

Activities under this session will allow participants understand different frameworks and strategic documents related with environment, gender and social inclusion. Activities under this module will allow participants to understand mainstreaming of adaptation programs at policy, process and action levels.

Activity 6.3.1 Explanation of climate resilience framework and mainstreaming.

This activity will build on the content covered in Activity 5.2.1 in the last module by explaining the concept of climate resilience in more detail. The activity will cover how it can be mainstreamed in the local and sectoral planning of the Government of Nepal.

Method	Process	Time	Materials
Presentation	• Use PowerPoint presentation to explain how each of the following components can be mainstreamed in the local planning process and why it is important to do so: - Climate adaptation and mitigation - Environment and waste disposal - Gender and social inclusion - Governance Also use Handout 8 as a reference. 🔔 Refer to Additional Resources at the end of this module to learn about it in detail.	30 mins	Multimedia projector Laptop Handout 8

Activity 6.3.2 Presentation on Environment Friendly Local Governance Framework, 2013.

Method	Process	Time	Materials
Presentation	• Use display material to explain how local governance can be environment friendly, based on the Environment Friendly Local Governance Framework, 2013, and discuss legal and policy frameworks, as well as environment friendly indicators at the household, ward, VDC and municipality levels 🔔 Refer to Additional Resources at the end of this module to learn about it in detail.	30 mins	Multimedia projector Laptop EFLG Framework

Activity 6.3.3 Gender analysis in climate change mainstreaming

Method	Process	Time	Materials
Toolkit	Use Tool 19 and follow the process there.	45 mins	Refer to Tool 19

Activity 6.3.4 Social inclusion in climate change mainstreaming

Method	Process	Time	Materials
Toolkit	Use Tool 20 and follow the process there.	45 mins	Refer to Tool 20

SESSION 6.4 PARTICIPATORY MONITORING AND EVALUATION

2 HOURS 45 MINUTES

Activity 6.4.1 Presentation on minimum conditions and performance measurement (MC/PM)
Monitoring of mainstreaming at different levels will be carried out using different tools specially MC/PM planning guideline and logical framework.

Method	Process	Time	Materials
Presentation	• Use a power point presentation along with Handout 9 to explain: - What MC/PM system means - What the indicators are - How it is used by the Government of Nepal in other projects - How it can be used for climate change projects as well - Why it is important to learn this system 🔔 If there is extra time, give an overview of log frame of National Planning Commission and some Public Audit Techniques.	1 hour	Multimedia projector Laptop Handout 9

Activity 6.4.2 Presentation on monitoring and evaluation (M&E)

Method	Process	Time	Materials
Presentation	Use a PowerPoint presentation to quickly go through various tools that are used for M&E of climate change projects. Explain participants different M&E frameworks and tools from LAPA, CARE's CBA framework and PMERL including milestones and indicators to monitor mainstreaming at the local level. 🔔 Refer to Additional Resources at the end of this module to learn about it in detail.	1 hour 45 mins	Multimedia projector Laptop Handout 10, 11, and 12

Group Exercise 6.1 (15 mins):

Discuss adaptive capacity at the local level

- Use the ACCRA Framework (Handout 12) to identify and discuss specific examples of the 5 characteristics of adaptive capacity

PROCESS:

Option 1:

- The facilitator explains in plenary the 5 characteristics of adaptive capacity (ACCRA Framework) by giving a few concrete examples of each characteristic
- Continue identification and discussion in plenary

Option 2:

- If time permits, break participants into smaller groups
- Groups discuss the framework and come up with concrete examples for each characteristic of the adaptive capacity
- Be prepared to present in plenary

Group Exercise 6.2 (30 mins):

1. During this group exercise, using handout 11, participants will practice and learn to develop concrete indicators for the PMERL plan. They will understand what constitutes an indicator, distinguish quantitative indicators from qualitative ones, and consider how different indicators will be measured and by whom.
2. The working groups are given a list of outcome indicators and CARE's Milestones and Indicators for CBA Framework. Based on the materials provided, develop outcome indicators for the new PMERL plan.
3. Develop two indicators for each indicator category: quantitative, qualitative, and in the context of climate change.
4. Respond to the following questions: How will we know that change has happened in this outcome? How will we know success when we see it? What will the evidence of this change be?
5. Distinguish between quantitative and qualitative indicators. Determine how the different indicators will be measured and whether they need external input or whether they can be monitored by the community itself.

TOOLS AND APPROACHES:

TOOL 19 GENDER ANALYSIS – A TOOL USED IN LAPA

Gender analysis is a practical tool for analyzing the nature of gender differentiation. It asks questions about who does what, where, when and with what resources. Gender analysis is done to:

- Better understand the gender dimensions of climate change in our communities
- Promote gender equality through the various interventions and outcomes in LAPA
- Help us find the best strategies and solutions to address the different adaptation needs of men and women

This is an exploration of power relationships between women and men in a particular program context. It allows us to understand how poverty and climate change affect men, women, boys, and girls differently, and to identify their specific needs, concerns, and priorities. From a gender analysis it will be easy to identify and understand the differences in men and women in different areas as shown in the figure.

Areas of discussion: Gender analysis has to be mainstreamed into various processes and tools within LAPA.

Explain in the context of Hariyo Ban Program if necessary. While doing so, the following areas needs to be considered:

Roles and responsibilities • What do men/women do? • Where do they do it? (location/ patterns of mobility) • When do they do it? (daily and seasonal patterns)	• Productive roles (paid work, self-employment, and subsistence production) • Reproductive roles (domestic work, childcare and care of the sick and elderly) • Community participation/self-help (voluntary work for the benefit of the community as a whole) • Community politics (representation/decision-making on behalf of the community as a whole)
Assets • What livelihood assets/ opportunities do men/women have access to? • What constraints do they face?	• Human assets (e.g. health services, education, knowledge, and skills) • Natural assets (e.g. land, labor, forest) • Social assets (e.g. social networks) • Physical assets (transport, communications) • Financial assets (capital/income, credit)
Power and decision-making • What decision making do men and/or women participate in? • What decision making do men/ women usually control? • What constraints do they face?	• Household level (e.g. decisions over household expenditure) • Community level (e.g. decisions on the management of resources and services, community planning process) • Local government level (e.g. engagement in local political meetings related to community development) • National government level
Needs, priorities, and perspectives • What are women's and men's needs and priorities? • What perspectives do they have on appropriate and sustainable ways of addressing their needs?	• "Practical" gender needs (response to short-term immediately perceived needs arising from and reinforcing women's reproductive and productive roles/assets, e.g. clean water, health care, housing, food provision. Women's needs differ from men's needs because of their different tasks and responsibilities.) • "Strategic" gender needs (response to long-term needs arising from women's subordinate position which leads to a transformation of gender division of labor for all women. Requiring changes to existing gender roles/assets to create greater equality of influence, opportunity, and benefit, e.g. increasing women's access to decision-making, resources, land, credit, etc.) • Perspectives on improved services and delivery systems, such as prioritized services; choice of technology; location, type and cost of services; systems of operation, management, and maintenance, etc.

Note: In various gender analyses, consideration has to be made to include both women and men of the same level, social and age groups are separately discussed. Facilitators should have a good understanding gender analysis.

Gender role analysis tools such as i) gender role analysis ii) access and control analysis iii) gender mobility mapping could be used or integrated into the LAPA tools at different stages.

i) Analysis of who does what, when, where, and for how long through activity profiling

This method can be used with individuals or groups and can be done when researching a community, a neighborhood, an organization or program. Participants are asked to map out, calendar-style, the activities that they undertake during an entire day or week, with approximate time (in hours) spent doing that activity. This activity will be useful for understanding who does what and for how long. It will be important to consider during adaptation planning, prioritizing, and implementation.

Activities	Women/girls	Men/boys
Productive: agriculture, income generation, employment		
Reproductive: water, fuel, cooking, child care, market		

Activity profiling can be mapped on the timeline, either daily, weekly, monthly, or yearly as relevant to discussion

ii) Gender Analysis of decision, responsibility and access

Activities	Who decides	Who works	Who has access			
	M	F	M	F	M	F
Fuel wood collection						
Water collection						
Work in agricultural fields						
Training						
Revolving fund						
Meetings						

Separate focus group discussion for women and men and ask about the questions from the table. Fill in the answers. Consider asking whether caste or ethnic minority also makes a difference in such questions and note the answers. This analysis will give an idea of who is responsible for which task, who makes decisions, and who has access to resources. The activity lists could be customized for particular discussions. After finishing the list, ask participants the following questions. The hope is to make participants see the existing differences and motivate them to address such issues.

- Who makes most of the decisions?
- Who has more control?
- Who works more?
- Who does what work, who makes decisions about it, and who has more impact?
- Is the situation good? What is necessary to improve the situation?
- If women are not involved in the adaptation planning process, who will be vulnerable?

This analysis needs to be documented and used for policy making and during the adaptation planning process.

Gender mobility map

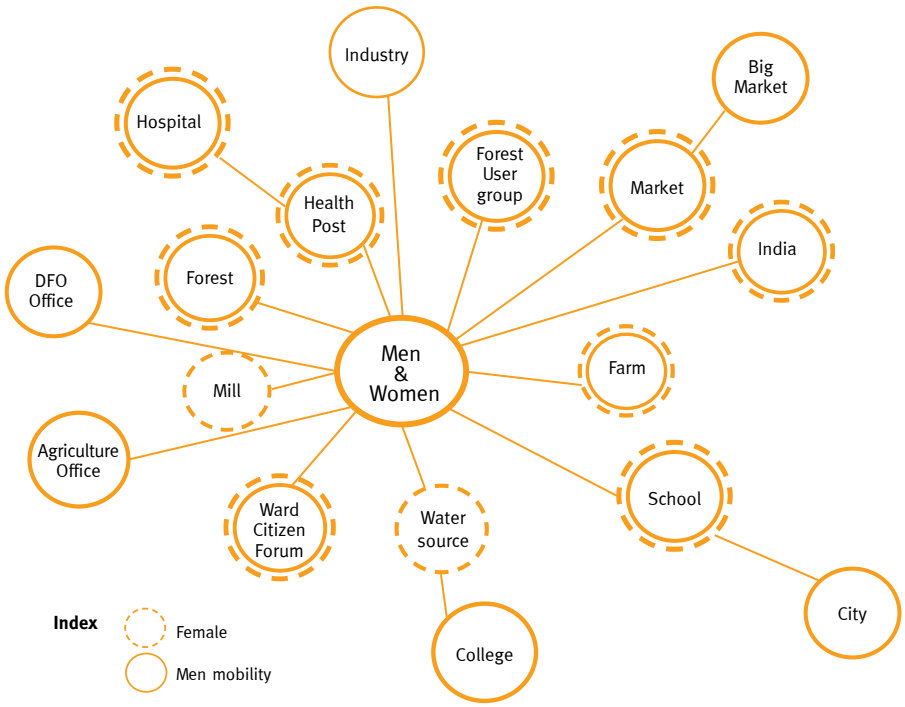
In order to analyze women's access to various resources and services, a mobility map exercise is useful. This will help participants to understand women's capacity to access resources and the possible implications this has on their ability to make decisions. The map will show subjects and areas where women have mobility and access to services such as education, health, employment, and finance. Any exclusion will be immediately noticeable.

Discussion will be held among a group of women and men of similar backgrounds. Explain the analysis objectives, process, and how this will be useful. Start with one topic, such as employment, and map from nearest to farthest distances. Ask why, what, and when questions to get more information. During this process discussion will focus on the present situation, problems, and possible solutions related to the particular topic of discussion.

After the map is complete, the facilitator should start a group analysis. Ask:

- What is the difference between the mobility of men and women? Why is it different?
- What is the impact of such mobility in relation to climate change?
- How could the situation be improved in the context of climate change impact and induced disaster?

The outcome of the discussions could be helpful in planning adaptation actions targeted to women.



An example of a mobility map

Source: Government of Nepal LAPA manual 2011.

Process	Materials needed	Additional notes
Use one of the gender analysis tools listed above. The directions for using these tools are enclosed.	Flip charts Markers	

Gender integration checklist

Gender integration checklist can also applied following the seven steps of Local adaptation plan for action (LAPA).

STEP1:SENSITISATION {Carried out in all steps}	• How men and women and other marginalized groups will be impacted by the climate change? • Who have the access and control over resources and how this will impact in responding to CC? • Are there other social, political or economic issues which make particular people within the community more vulnerable than others?
STEP2:VULNERABILITY & ADAPTATION ASSESSMENT	• Historically who are the more vulnerable to the disasters (men, women, or other marginalized groups? • Do women and other marginalized groups have equal rights, and access to resources? • What social groups (men, women, old, young, caste etc) within the community are most vulnerable to climate change?
STEP3:PRIORITISATION OF ADAPTATION OPTIONS	• What are the adaptation options preferences of men and women and marginalized groups? • Are we addressing the need of a women? • Do women and marginalized groups have equal access to information,skills and services?
STEP4:FORMULATION OF ADAPTATION PLAN	• Who is developing the plan? Have enough consultation done to ensure possibility of women's time availability and engagement? • Who makes the decisions about the plan? Do women have power to make decisions?
STEP5:INTEGRATION OF ADAPTATION PLAN INTO PLANNING PROCESSES	• Have all stakeholders been aware about the need and interests of women? • Has there enough opportunity to influence to get the funding for women prioritized plan? • Are local planning processes participatory and include both women and marginalized groups? Do they have a voice in local planning processes
STEP6:SENSITISATION {Carried out in all steps}	• Are women and men and other marginalized groups working together to address challenges? • Do local policies provide access to and control over critical livelihoods resources for both women and men?
STEP7:PROGRESS ASSESSMENT {Carried out in all steps}	• Have measurements (indicators) been developed to monitor the project that measures the impact on both women and men separately? • Is the project managements team trained to monitor the projects from a GESI perspective?

Source: Government of Nepal LAPA manual 2011.

TOOL 20 COMMUNITY MAPPING FOR SOCIAL INCLUSION

Before using this toolkit, different dimensions of social exclusion (groups and people most at risk of social exclusion) must be determined. A set of the most commonly considered dimensions of social exclusion is presented in the following table:

List of community project	Social inclusion/exclusion dimensions [Considered – Yes (Y) or No (N)]								Are these projects climate sensitive? (Y or N)	How would you like to address this social exclusion (for N marking)?
	Caste, ethnicity	Employment status	Poverty level	Gender (women, girls)	Age	Remoteness of location	Education level	Disability/ disease		
A	Y	Y	Y	Y	N	Y	Y	N	Y	
B	Y	N	Y	Y	N	N	Y	N	Y	
C	N	N	Y	Y	N	N	Y	N	Y	
D	Y	N	N	Y	N	N	Y	N	N	
E	Y	N	Y	Y	N	N	Y	N	Y	
F	N	N	N	N	N	N	N	N	N	
G	Y	Y	Y	N	N	Y	Y	Y	Y	

Process	Materials needed	Additional notes
• Allow a brainstorming session to let participants come up with social inclusion dimensions. • Add any more dimensions they have not come up with and ask them to fill in the above chart in small groups.	Markers Pens	


गाविस बाहिर
गाविस
समुदाय
घर भित्र

HANDOUTS

HANDOUT 5 LOCAL PLANNING SYSTEM OF NEPAL

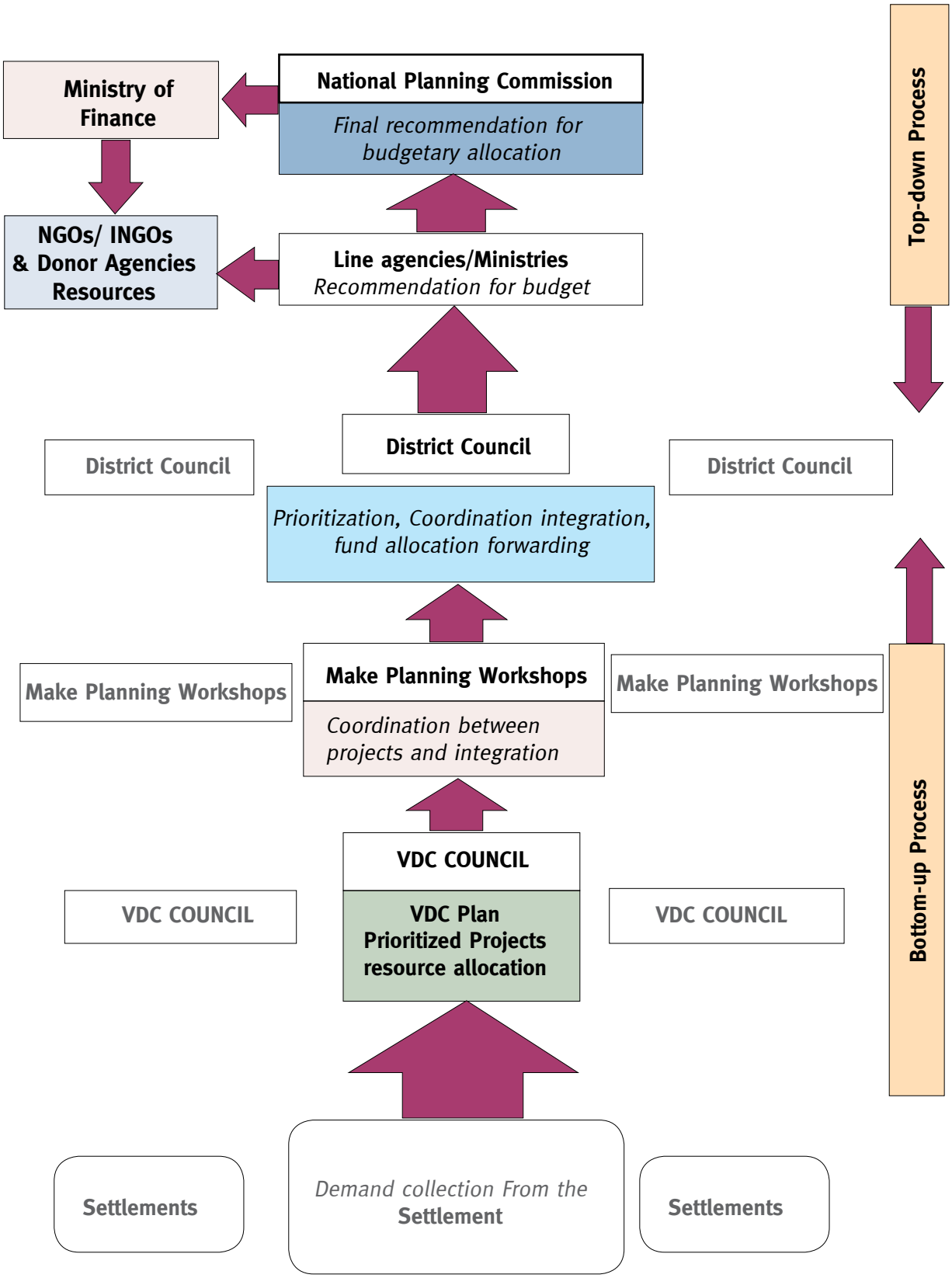
The chart below presents the local planning system of the Government of Nepal. Multiple copies should be made and distributed to participants before starting Module 6.

STEPS	THEME	ACTIVITY	WHO/WHEN
Primary	Information	Data analysis and preparation of resource map	DDC information centre
step 1	Guidelines	Fix budget ceiling	NPC/middle of November
step 2	Revision of guidelines	Revision of guideline and budget ceiling	DDC/ Third week of November
step 3	Planning Workshop	Discussion of plan priority and budget with DDC member and line agency heads	DDC/End of November
step 4	VDC meeting	Discussion of possible priority sector and programme/projects at ward and settlement level	VDC/Third week of December
step 5	Selection of Projects	Discussion of felt need of community, prioritize projects and fill-up of demand collection	Community/Third week of December
step 6	Ward Meeting	Compilation of community demand, prioritization and recommendation for VDC	Ward meeting/Last week of December
step 7	VDC Meeting	Compilation of ward level projects, Resource estimation, Prioritization, Classification of projects as per resource need, and classify projects to be implemented by VDC and to be forwarded to Ilaka/district level.	VDC/January first week
step 8	VDC Council Meeting	Approval, with or without alteration, of the VDC Meeting outcomes (Step 7)	VDC Council/Second week of January
step 9	Ilaka Level Planning Workshop	Compilation,Prioritization and Recommendation of projects received from VDC Council.	Coordinated by Ilka Member / First week of February
step 10	Sectoral Planning Meeting	Classification of projects recommended from ilaka level, Prioritization and recommendation for further processing.	Sectoral Committee of DDC/Third Week of February
step 11	Integrated Planning Formulation	Inclusion, exclusion and revision of priority of the projects on recommendation of Sectoral Planning Committee.	Integrated Planning Committee of DDC/End of February
step 12	DDC Meeting	Compilation and analysis of projects from Sectoral committees and appraisal of compiled projects i.e, environmental, economic and social standpoint, Prioritization of projects, classification of projects according to resource i.e, implementation through own resource or requires central level resource through sectoral ministry.	DDC/First week of March
step 13	DDC Council	Approval of programmes and policies of district	Second week of March
step 14	Implementation	Presents the approved programmes to the central agencies. Implementation of programmes after approval of central agencies	Fourth week of March DDC and line agencies after approval generally at end of July/DDC and line agencies

Source: IRAP 2003, p 33

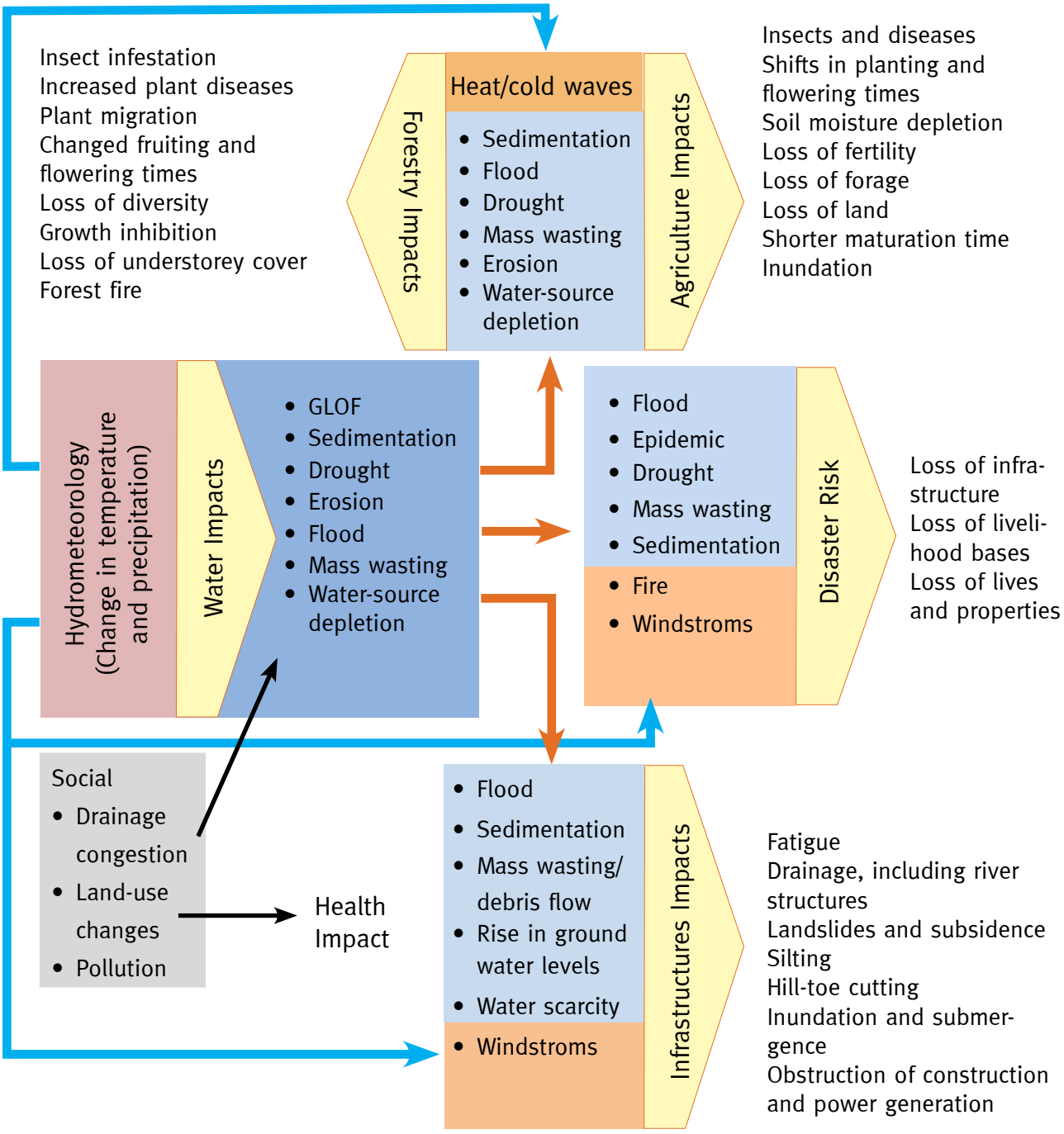
HANDOUT 6 LOCAL PLANNING STRUCTURE OF NEPAL

Place a large printed copy of this figure on the wall before starting Module 6.



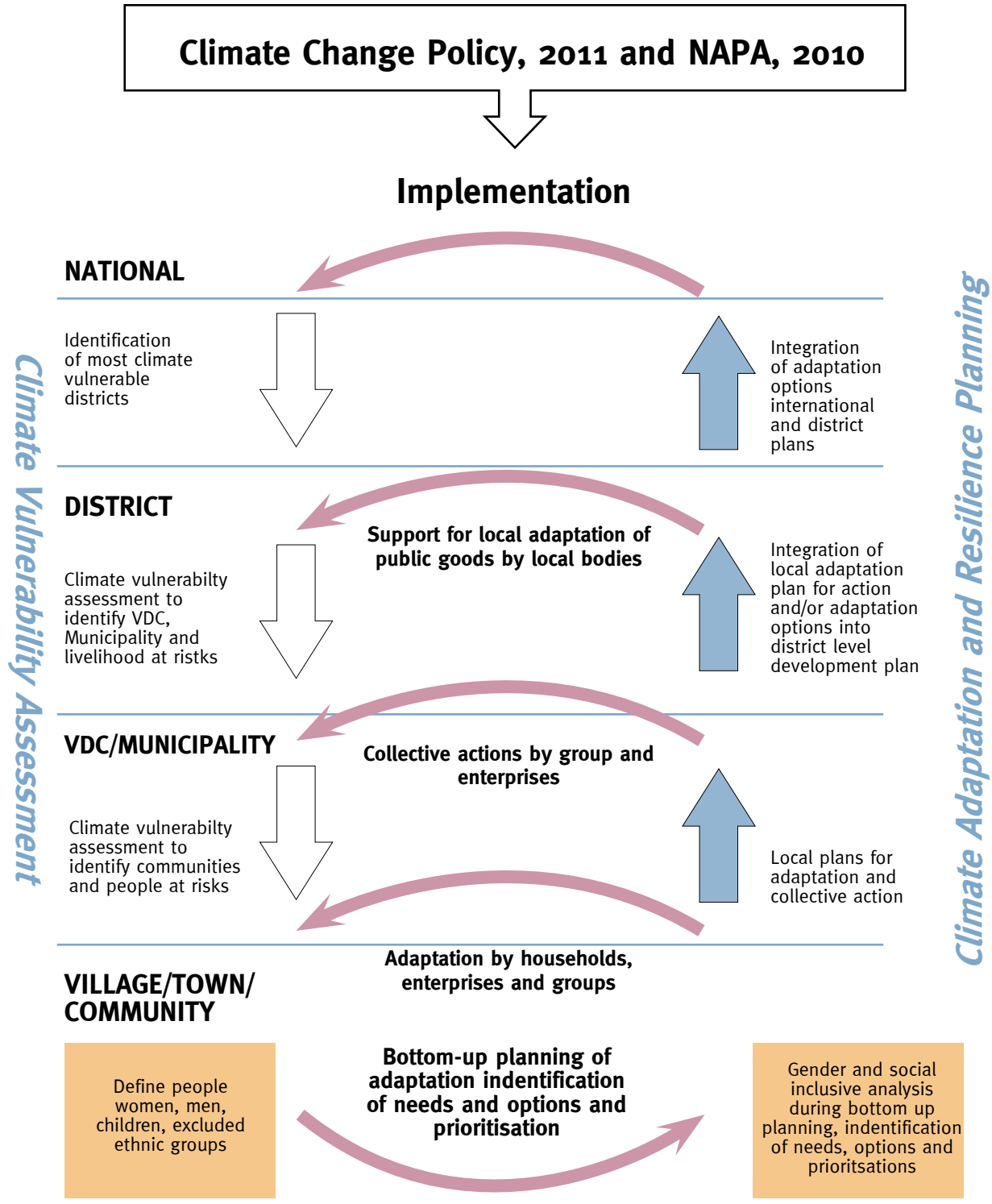
Source: Adopted from IRAP 2003, p 11.

HANDOUT 7 ILLUSTRATION OF LINKS BETWEEN CLIMATE CHANGE IMPACTS AND DEVELOPMENT SECTORS



Source: National Planning Commission 2011, p 36

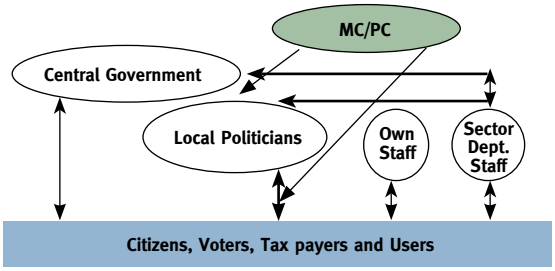
HANDOUT 8 LAPA – THE MAINSTREAMING FRAMEWORK



HANDOUT 9 MINIMUM CONDITIONS AND PERFORMANCE MEASUREMENT

"The Government of Nepal (GoN) has been implementing the Minimum Conditions and Performance Measures (MC/PM) system to monitor performance of the local bodies (LBs) as an integral part of local governance reform for a number of years; the system is also used as a tool for grant allocation to the LBs (GoN 2010 b)". MoFALD has delegated this authority to the Local Bodies Fiscal Commission. The main objective of this system is to make the local services strong by establishing a Performance Based Grant System so that a more accountable local government is created.

MC/PM Influence on Accountability Mechanisms



[Source: GoN 2010 a, p. 19]

The areas covered by the MC/PM system are briefly highlighted in the table below.

Minimum conditions		**Performance measures**	
Area	**Number of indicators**	**Area**	**Number of indicators**
Planning and management	5	Planning and program management capacity	8
Financial management	7	Budget management	6
Formation and function of committees	2	Financial management	9
Transparency	1	Fiscal resource management capacity	6
		Budget release and program execution	7
		Communication and transparency	8
		Monitoring and evaluation	5
		Organizations, service delivery, and property management	8
Total	15		57

HANDOUT 10 EXAMPLE OF MONITORING AND EVALUATION FRAMEWORK

A simplified generalized framework for monitoring and evaluation of any project is presented below.

Desired outputs	**Indicators**	**How to measure results (data collection)**
(1)	X	.....
(2)	Y	.....
(3)	Z	.....
Desired outcomes	**Indicators**	**How to measure results (data collection)**
(1)	X	.....
(2)	Y	.....
(3)	Z	.....

[Source: CDEMA, p.59]

Guidance for the trainers:

Planning

- Introduce the core concept, rationale, and foundation of planning systems
- Introduce planning guidelines and frameworks
- Explain how to use guidelines, frameworks, and manuals and core tools
- Elaborate additional steps and processes for preparing resilient adaptation plans

Mainstreaming

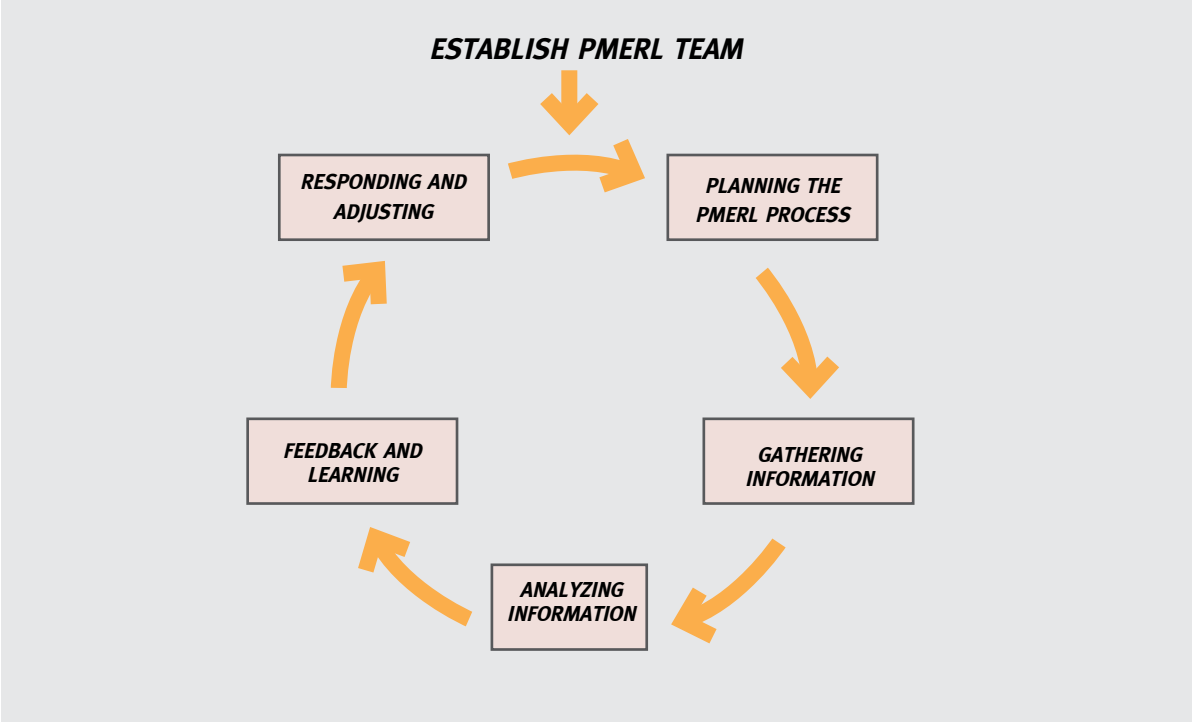
- Explain importance of mainstream, longer-term service delivery
- Explain process and steps for mainstreaming adaptation actions into sectoral, cross-cutting, and local plans
- Show how to integrate climate foresight and gender sensitivity into adaptation planning based on needs by integrating GESI perspectives and using targeted tools and techniques
- Explain ensuring priority actions, targeting, and resources allocation
- Emphasize how to maintain financial disciplines, transparency, and smooth investment

Monitoring and evaluation

- Explain the concept and framework of monitoring and evaluation with progress markers
- Introduce monitoring and evaluation tools
- Create and strengthen mechanism or network to monitor progress
- Include ways to link with other networks and programs
- Provide guidance to study the national-level monitoring framework – MCPM
- Provide guidance for using the Monitoring and Evaluation Framework and CARE Participatory Monitoring Evaluation, Reflection and Learning (PMERL)

HANDOUT 11 PARTICIPATORY MONITORING, EVALUATION, REFLECTION AND LEARNING

Five key phases of participatory monitoring, evaluation, reflection and learning (PMERL) for the community adaptation plan are presented below.



Source: CARE PMERL Manual, p 29

The monitoring plan for community based adaptation is as follows:

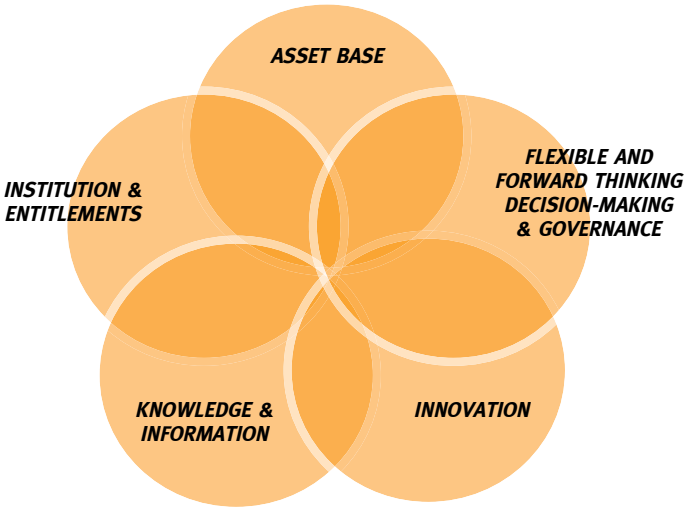
THE OUT COME AND CONTEXT MONITORING PLAN OF INFORMATION

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

HANDOUT 12 THE ACCRA FRAMEWORK FOR THINKING ABOUT LOCAL ADAPTIVE CAPACITY

According to the Africa Climate Change Alliance (ACCRA), it is not possible to directly measure adaptive capacity as it refers to the potential of individuals and communities to respond to change, instead other factors that contribute to adaptive capacity of a system. The five characteristics that make up the local adaptive capacity are presented in following framework.

THE ACCRA FRAMEWORK: LOCAL ADAPTIVE CAPACITY



Source: CARE PMERL Manual, p 51

ADAPTIVE CAPACITY AT THE LOCAL LEVEL

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

Source: CARE PMERL Manual, p 21.

Additional Resources:

- Mainstreaming Climate Change Adaptation: A Practitioner's Handbook, CARE International in Vietnam. http://www.careclimatechange.org/files/adaptation/CARE_VN_Mainstreaming_Handbook.pdf
- Participatory Monitoring, Evaluation, Reflection and Learning for Community-based Adaptation: A Manual for Local Practitioners, CARE International, 2012. http://www.care.org/sites/default/files/documents/CC-2012-CARE_PMERL_Manual_2012.pdf
- Integrating Climate Change into Development Planning, Training manual, GIZ, 2012.
- Environment Friendly Local Governance Framework, 2013, MOFALD.

Annex 1: Acronyms

ACCRA	Africa Climate Change Alliance
CARE	Cooperative for Assistance and Relief Everywhere
CBA	Community Based Adaptation
CBO	Community Based Organization
CCC	Climate Change Council
CDEMA	Caribbean Disaster Emergency Management Agency
CFUG	Community Forestry Users groups
CHAL	Chitwan Annapurna Landscape
CHULI	Churia Livelihood Improvement
CVCA	Climate Vulnerability and Capacity Analysis
DDC	District Development Committee
DOLIDAR	Department of Local Infrastructure Development and Agricultural Roads
EBA	Ecosystem based Adaptation
FAO	Food and Agriculture Organization
FECOFUN	Federation of Community Forestry Users Nepal
FG	Farmers Groups
GESI	Gender Equality and Social Inclusion
GON	Government of Nepal
IPCC	Intergovernmental Panel on Climate Change
IPCC SAR	Intergovernmental Panel on Climate Change Second Assessment Report
IPCC TAR	Intergovernmental Panel on Climate Change Third Assessment Report
IUCN	International Union for Conservation of Nature
LAPA	Local Adaptation Program for Action
LGCDP	Local Governance and Community Development Program
MCCIC	Multi stakeholder Climate Change Initiatives Coordination Committee
MCPM	Minimum Conditions and Performance Measurement
MOFALD	Ministry of Federal Affairs and Local Development
MOFSC	Ministry of Forests and Soil Conservation
MOSTE	Ministry of Science, Technology and Environment
NAPA	National Adaptation Program of Action to Climate Change
NGO	Non Governmental Organizations
NPC	National Planning Commission
NTFP	Non Timber Forest Products
NTNC	National Trust for Nature Conservation
PECCN	Poverty Environment Climate Change Network
PMERL	Participatory Monitoring Evaluation Review Reflection and Learning
REDD	Reducing Emissions from Deforestations and Forest Degradation
TAL	Terai Arc Landscape
TOT	Training of Trainers
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNISDR	United Nations International Strategy for Disaster Reduction
USAID	United States Agency for International Development
WWF	World Wildlife Fund

Annex 2: Bibliography

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The Hariyo Ban Program is named after the famous Nepali saying 'Hariyo Ban Nepal ko Dhan' (Healthy green forests are the wealth of Nepal). It is a USAID funded initiative that aims to reduce the adverse impacts of climate change and threats to biodiversity in Nepal. This will be accomplished by working with the government, communities, civil society and private sector. In particular, the Hariyo Ban Program works to empower Nepal's local communities in safeguarding the country's living heritage and adapting to climate change through sound conservation and livelihood approaches. Thus the Program emphasizes the links between people and forests and is designed to benefit nature and people in Nepal. At the heart of Hariyo Ban lie three interwoven components – biodiversity conservation, payments for ecosystem services including REDD+ and climate change adaptation. These are supported by livelihoods, governance, and gender and social inclusion as cross-cutting themes. A consortium of four non-governmental organizations is implementing the Hariyo Ban Program with WWF Nepal leading the consortium alongside CARE Nepal, FECOFUN and NTNC.

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