



# Capacity strengthening in climate change vulnerability and adaptation strategy assessments

## Trainer's guide



In collaboration with:



## Abbreviations

AIACC	Assessment of Impacts and Adaptation to Climate Change Project
APF	Adaptation Policy Framework
C3D	Climate Change Capacity Development Project
CIAT ( <i>Spanish</i> )	Centro Internacional de Agricultura Tropical
ENDA –TM	Environment and Development – Third World
GIS	Geographical Information Systems
IPCC	Intergovernmental Panel on Climate Change
LEG	Least Developed Countries Expert Group
MAP	Accelerated Method for the Participative Analysis of Needs
NGO	Non-Governmental Organization
NAPA	National Adaptation Programme of Action
START	SysTem for Analysis, Research and Training
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNITAR	United Nations Institute for Training and Research

## Introduction

This manual is intended to guide and support trainers whose activities seek to support and strengthen capacities of participants in the UNFCCC process, particularly in the domain of vulnerability and adaptation. This training of trainers' manual is one of the components of the Climate Change Capacity Development (C3D) project; a project jointly implemented by ENDA-TM (Dakar), the Energy Research Centre (ERC, Cape Town), the Munasinghe Institute for Development (MIND, Colombo) and UNITAR (Geneva).

This training initiative is based on certain premises:

- Most developing countries are keen to reduce their vulnerability to natural disasters and the possible impacts of climate change. They are therefore actively engaged in researching, defining and applying strategies for adaptation and early warning systems. Evaluations of vulnerability and adaptation strategies are already key activities being carried out by countries and regions facing climatic extreme events with the aim of measuring their degree of exposure to natural risk and their current vulnerability. In the context of climate change, most developing countries have undertaken vulnerability and adaptation studies in order to identify adaptation actions aimed at reducing their future vulnerability and have started to plan for their implementation. The significance and importance of evaluating vulnerability and adaptation strategies is that it identifies and measures the level of the short- and long-term threats (natural disasters, climate change) and the ability to cope with these threats, guides and supports decision-making, government policies, planning, international aid and investment, helps and orientates processes for deciding on priorities in strategies and initiatives to reduce vulnerability and adapt and, finally, for defining and applying measures aimed at reducing present and future vulnerability.
- Several global frameworks and guidelines have been developed to evaluate vulnerability and adaptation strategies. Their objective is to assess vulnerability and adaptation strategies in the context of climate variability and change (IPCC, APF, NAPA, etc.). They are part of the international regime engaged by the UNFCCC.
- In developing countries, significant gaps exist, in terms of capacity and available resources, to produce vulnerability assessment and adaptation strategies. Yet, these assessments and strategies form the first stage of any sustainable policy for coping with climate variability and change. Reinforcing or creating real capacity in developing countries to carry out this type of evaluation will provide a better understanding of their degree of vulnerability, capacities and needs in the face of such problems, and help identify adaptation measures and initiatives to reduce vulnerability and define policies under the perspective of sustainable development. Such initiatives will thus help and support the implementation of recommended actions as part of international agreements such as the U.N. Framework Convention on Climate Change and its Kyoto Protocol. At the same time, the strengthening and/or creation of capacities at national and regional levels will assist developing countries in participating in international processes, and make it easier to coordinate climate change issues and integrate them into national and regional policies. The latter will assist in achieving greater sustainable development and enhancing the fight against poverty. Finally, this capacity strengthening process will contribute to the negotiation of bilateral or

multilateral support in the fields of disaster management, early warning systems and climate change.

The participative approach recommended in this manual is dictated by the nature of the project, its objectives and the expectations of developing countries. As trainers, you will be leading sessions to build/strengthen capacity in assessing vulnerability and formulating adaptation strategies. This manual aims to help you place the problem in its context and guide you in your use of the training materials.

## The general context

Natural disasters linked to climate variability and climate change are likely to affect all sectors of a country and all layers of its population indiscriminately. In recent years, reducing vulnerability to natural disasters and climate change has become an urgent issue for developing countries, for at least two reasons. The first reason is that these countries lack resources or other necessities to fully deal with the social and economic effects of these disasters or changes; the second is that the economies of these countries are heavily dependent on sectors and resources highly sensitive to disasters, and climatic variation and change, such as agriculture, coastal resources, water resources and infrastructure. Consequently, for these countries, adapting to natural disasters, and climate variability and change is a major concern on the sustainable development policy agenda.

To be able to adequately address climate change in a sustainable development context, one must begin by carrying out vulnerability and adaptation assessments. These assessments will identify current hazards and threats and the strategies, policies and actions needed to cope with them. Addressing current vulnerability will assist in reducing future vulnerability due to worsening impacts. In the existing international legal context (see the Background Paper on International Developments in Climate Change Policy) a range of general conceptual frameworks, initiatives, mechanisms, financial and technical support schemes have been designed to assist in assessing vulnerability and in formulating adaptation strategies.

Multiple definitions of vulnerability and adaptation abound. Any one of these can often also be interpreted and employed in a number of ways. Thus it is imperative to define all terms and concepts to be used prior to beginning an assessment (see Glossary of basic terms and concepts). The definitions chosen may influence what is going to be measured, how it is going to be measured and who is going to use the information produced. Vulnerability is relative, not absolute. In assessing the degree of vulnerability and adaptive capacity, it must form an integral part of the social, institutional and political processes as it has important socio-economic and environmental consequences. Pragmatically, the vulnerability and adaptive capacity assessments need to take into account the development processes first.

Transparency and rigour are needed to define concepts, terms, and methods, and identify tools. The point is to arrive at a set of clear, pragmatic definitions that offer partners, stakeholders, involved groups and users a **common language**. A sound understanding of these definitions allows for the identification of appropriate methodological needs, modelling, quantification and evaluation tools, and their validation (see the Glossary of basic terms and concepts).

Above and beyond risks and vulnerability, the challenges in terms of strategies and policies for sustainable development lay in exploring adaptive capacities, enhancing resilience and identifying possible advantages and opportunities of climate change in order to cope with its consequences and, above all, to promote policies and preventive measures to face climate variability and change.

## Training course structure and method

The training sessions are made up of 5 different modules. Each module contains texts (PDF documents) and presentations (PowerPoint, PPT/PPS) which introduce and explain each theme, along with a bibliography, supporting documents and Internet links (PDF documents) that will help trainers and trainees to learn more about the subject areas covered. The following icons have been chosen to make it easier to identify the various elements in the training package:

	<p><b>For trainers:</b> Description of objectives, training methodology and tasks to be carried out by trainers, along with basic knowledge in the field of evaluation and techniques essential to the training of trainers.</p>
	<p><b>Videos:</b> The videos offer an overview of natural disasters and climate change worldwide. They may be used to initiate discussion on the need to assess vulnerability and adaptation strategies.</p>
	<p><b>Introductory texts:</b> Materials cover basic knowledge, and some explanations of the important themes and topics covered, including an introduction to group work.</p>
	<p><b>PowerPoint presentations:</b> The basic teaching presentations aim to introduce and explain key themes and topics of undertaking assessments, and to present case studies and their applications. They may be used as an introduction and/or to support group work.</p>
	<p><b>Bibliography and Internet links:</b> This section highlights sites where pertinent materials may be downloaded and pinpoints other resources to deepen knowledge.</p>
	<p><b>Support documents:</b> These materials may be used to support basic knowledge of the themes, major topics, case studies and other applications covered in the course.</p>
	<p><b>Glossary and concepts:</b> This section describes and defines the basic terms.</p>
	<p><b>Group work:</b> Group work may involve general discussions; applying methods and tools to real assessment exercises; or analyzing their usefulness and limitations in developing real examples.</p>

**Methodology:** The methodology chosen for this training is based on the principle of “learning by doing”. It focuses on group work, where groups are comprised of participants with common interests and varying areas of expertise.

### **Brief description of the modules**

**Module I: An introduction.** The goal is to identify the context(s) in which vulnerability and adaptation assessments will be carried out and to review the language that will be used in the context of climate change.

-  Objectives, methodology and structure of the Training of Trainers workshop
-  Vulnerability and adaptation: An Introduction
-  Glossary of terms and concepts
-  Background Paper on International Debates in Climate Change Policy
-  Background on frameworks, methods and tools for vulnerability and adaptation assessments: How to move from reactive to proactive approaches.
-  Vulnerability and Adaptation Bibliography and Internet links (for Modules 1 & 2)

Module 1 includes a presentation on the objectives, methodology and structure of the training. Nevertheless it is important to note that in the context of an activity carried out by trainers, this introductory presentation needs to be prepared for and adapted to the target user group and to the specific goals of the training session.

### **Module II: Concepts, frameworks, methodologies and tools for vulnerability and adaptation assessments.**

It is a theoretical module that provides the background material for concepts, frameworks, methodologies and tools used in assessing vulnerability and adaptation strategies. It helps in using and applying methodological frameworks appropriately, and choosing the correct methods and tools for the assessments.

-  Concepts, frameworks and methodologies for vulnerability and adaptation assessments
-  Inventory of tools for vulnerability and adaptation assessments
-  Introductory Videos:
  - Vulnerability: The tragedy of natural disasters (3 mins 47)
  - The consequences of vulnerability: Aid and Reconstruction (2 mins 17)
  - The implications of vulnerability: The social impacts resultant from disasters (1 mins 34)



### Toolkit for Vulnerability and Adaptation Assessments

Background on frameworks, methodologies and tools for vulnerability and adaptation assessments: How to move from reactive to proactive approaches



Vulnerability and Adaptation Bibliography and Internet links (for Modules 1 & 2)

### **Module III: Vulnerability and Adaptation: From theory to practice.**

This module includes a series of practical case studies on different issues, sectors, regions and/or countries. It demonstrates how to apply different methodological frameworks, concepts, methods and tools.



Case study 1: From the assessment of vulnerability to decision-making: Natural disasters and climate change in Central America



Case study 2: Vulnerability of coastal areas and climate change: The example of Senegal



Case study 3: An evaluation of the vulnerability of agriculture and adaptive strategies aimed at achieving food security in the Sahel: The example of the Niayes in Senegal



Case study 4: Food Security and Climate Change: Building Adaptation Strategies for Bangladesh.



Case study 5: Water resource management strategies in response to climate change in South Africa: Specific focus on municipal water in arid regions.



Reference material: Not if but when: Adapting to natural hazards in the Pacific Islands Region.



Case Study Bibliography and Internet links

It is important to note that case studies are illustrated examples. Trainers may choose to use these case studies or to develop their own, as required, to meet the users' needs and interests, and the goals of the training.

### **Module IV: Practical exercises: Objectives and organization.**

This module offers a series of practical exercises and applications covering a variety of themes. It walks participants through the theoretical aspects of vulnerability and adaptation assessments to their practical implementation. These practical exercises should be done in groups (balanced in terms of interest and expertise). To achieve this balance, the trainer should co-ordinate the formation of working groups, taking into consideration the multi-disciplinary approach required, the themes, methodologies and tools proposed, the expertise and needs of participants. The

presentation of the results is an important part in the exchange of experiences between the participants.



Objectives and organization of practical exercises



Working Groups' reports (prepared by each group)



Group work exercises



Exercise 1: Food security and climate change



Exercise 2: Vulnerability indicators



Exercise 3: Multi-criteria analysis for the identification of national adaptation strategies

### **Module V: Conclusions and lesson learned: Errors to avoid.**

This last section contains a critical analysis of all the lessons learned and the errors to avoid, based on case studies and practical exercises. The trainer should lead and coordinate the presentation of these findings as well as incorporate the results of the training evaluation (the feedback from the trainees as contained in the evaluation forms).



Conclusions: Errors to avoid (to be prepared by the trainer)



Course evaluation



Evaluation form Questionnaire

### **Using the training material:**

The training materials contained in the different modules of this training course may be used both for training trainers and as a proper training course, as they have been designed with both objectives in mind. Participants have different needs/roles that determine how material should be used. This can be summarised as follows:

- **Trainers** lead the training of participants. They must therefore have a sound understanding of the themes contained in the training course so that they can be trained themselves and then use this training material to run a course effectively.
- **Users** should be able to understand the contents of this training course in order to be able to judiciously use and apply the knowledge they have acquired.

Finally, the following software is required for using the material contained in this training course:

- **Explorer** or **Netscape** for accessing the course content via Internet or CD.
- **Windows Media Player** (VMW files) for the introductory videos.
- **Adobe Acrobat** (PDF files) for the introductory texts, bibliography and Internet links, support documents, and glossary of terms and concepts.
- **Windows Power Point** (PPT files) for the presentations.

### **Things to consider when preparing the training session**

The prime objective of this 'training of trainers' guide is to provide the future trainer with a generic pedagogical tool that he/she may use, and adapt as necessary, in training sessions that he/she subsequently organizes.

This 'training of trainers' workshop is the first step towards building/strengthening the capacity of individuals and institutions.

Prior to beginning a training exercise or workshop, it is advisable to agree upon a few fundamental principles for the session with workshop participants. This will ensure a good group dynamic develops, assist in the exchange of experiences amongst the participants and help in achieving the workshop results.

#### **One should try to:**

- Simplify theoretical questions and concentrate on training approaches that emphasize practical aspects;
- Only use the theoretical elements necessary for the training session in question;
- Ensure that the training and exercises provide participants with practical problem-solving skills;
- Group work should assist participants to understand the complexity of the problem/process under examination so as to better reflect the "field" reality;
- Communicate messages clearly to avoid further complicating the issue;
- Outline the potential uses and the limits of various tools so as to increase the likelihood that they will be used correctly;
- Design group exercises to reflect a number of different temporal and spatial scales and levels – as is often the case in many 'real-life' problems; and
- Obtain feedback on the training sessions and use this information to improve future sessions and adapt training modules to the user's needs.

#### **It is equally necessary to:**

- Avoid situations in which seemingly urgent problems mask other equally important, though potentially more longer-term, problems;
- Avoid using choices (poor populations, vulnerable sectors, etc) to justify all decisions;
- Avoid having terms of reference or exercise objectives that are too vague;
- Avoid situations in which trainers, moderators or rapporteurs dominate the group work;
- Create balanced working groups – ensure that each group has scientists, decision-makers, etc. Assign people to groups according to their backgrounds and their interest in the specific exercise;
- Avoid getting caught up in the definitions and terminology of a problem;
- Pay attention to the training process itself and not just the mechanisms of vulnerability and adaptation assessments in the abstract;
- Recognize the realities that country teams face and plan the group work and training sessions in line with those realities; and
- Define the training taking in account other interests and ongoing processes, e.g.:
  - By subject (food security, coastal zones, etc); or
  - By type of support (UNFCCC national communications, NAPAs, etc).