



# Integrating climate change adaptation into development planning

A practice-oriented training based on an OECD Policy Guidance

Modules on **Adaptation Monitoring and Evaluation (M&E)**

**Trainer's Handbook**

**giz** Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH

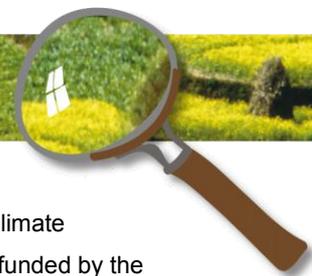


On behalf of  
Federal Ministry  
for Economic Cooperation  
and Development



On behalf of  
Federal Ministry for the  
Environment, Nature Conservation  
and Nuclear Safety

of the Federal Republic of Germany



The training course and associated materials are based on an OECD Policy Guidance “Integrating Climate Change Adaptation into Development Co-operation”, published in May 2009. They were generously funded by the **German Federal Ministry for Economic Cooperation and Development (BMZ) and developed by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH** in coordination with OECD and a broad range of reviewers from development agencies, NGOs and research institutions from around the world. The authors gratefully acknowledge the valuable feedback contributed by reviewers and training participants.

Additional modules on understanding climate science, finding climate information and dealing with uncertainty were developed by the project Inventory of Methods for Adaptation to Climate Change (IMACC) funded by the **International Climate Initiative (ICI) of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety**. The review and extension of module 6 on Monitoring and Evaluation was jointly funded by the BMU and BMZ and developed by the projects IMACC and the Climate Protection Programme for Developing Countries.

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**GIZ's Climate Protection Programme for Developing Countries** helps developing countries to adapt efficiently and appropriately to changed climatic conditions. Working together with our partners, we identify the options for action with regard to affected people, economic sectors and ecosystems.

The key task of the Climate Protection Programme for Developing Countries is to mainstream climate protection within the various activities of German Development Cooperation. This applies both to reducing greenhouse gas emissions, and to measures to adapt to climate change.

These tasks, however, cannot be successfully tackled by climate protection experts alone. The Climate Protection Programme for Developing Countries can therefore only work effectively if it is integrated into the networks of development cooperation and globally organised climate protection, and collaborates with national and international partners.

<http://www.giz.de/climate>

**Inventory of Methods for Adaptation to Climate Change (IMACC)** is a global project by GIZ funded by the **International Climate Initiative** of the German **Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)**. The project aims at user-driven application and advancement of existing tools and methods for adaptation, developing capacities for adaptation action and supporting South-to-South exchange, particularly among its seven partner countries: Grenada, India, Indonesia, Mexico, Philippines, Tunisia and South Africa.

IMACC is operating the platform [AdaptationCommunity.net](http://AdaptationCommunity.net) which provides introduction to key topics, examples of adaptation experiences as well as webinar recordings and an exchange forum. IMACC has also supported the development of additional modules of the training "Integrating Climate Change Adaptation into Development Planning" including the new modules on Monitoring and Evaluation (M&E).



*Have you carried out or participated in the training? If yes, we would appreciate hearing from you! Please send your feedback (who organised the training? who participated in the training? how did you find it? What worked and what did not?) to [climate@giz.de](mailto:climate@giz.de).*



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# Introduction to the Trainer's Handbook: Chapter on Monitoring and Evaluation

## Background

Integrating adaptation into development cooperation provides an essential opportunity to make more climate-resilient development investments. OECD's Environment Policy Committee (EPOC) and its Development Assistance Committee (DAC) therefore developed the *Policy Guidance on Integrating Climate Change Adaptation into Development Co-operation*<sup>1</sup> (OECD Guidance) with the aim of promoting understanding and identifying appropriate approaches and practical ways for **integrating climate adaptation into development policies and activities** at national, sectoral, project and local levels.

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, in close coordination with the OECD, developed this training course (referred to as "**OECD training**") and associated materials based on their involvement in the OECD Guidance, extensive adaptation activities on the ground in developing countries, and the GIZ tools for mainstreaming climate change into development cooperation activities, namely [Climate Proofing for Development, Environment and Climate Assessment of GIZ projects](#), and GIZ's Climate Strategy Advice.

The training material has subsequently been updated and extended. In 2012, new modules on understanding climate science, finding climate information and managing uncertainty were added. In 2013, the **module on Monitoring and Evaluation (module 6) was updated and extended** to reflect the specifics of measuring adaptation and to meet international demand for capacity building on this topic.

## Trainer's handbook: Chapter on Monitoring and Evaluation

This trainer's handbook chapter is focusing solely on the new adaptation M&E modules 6, 6a and 6b. It has been designed to **assist trainers who are conducting the M&E training course in a stand-alone format**, i.e. without the other modules of the full training course. This handbook therefore supplements Part II 'Introduction to the training modules' of the comprehensive trainer's handbook, which provides details on all modules of the full training course *Integrating Climate Change Adaptation into Development Planning*. It can be downloaded on the OECD Environment and Development Website together with all other training materials.<sup>2</sup>

Trainers are strongly encouraged to take a look at **Part I 'Introduction to participatory training methods'** of the comprehensive trainer's handbook which provides essential information for trainers including how to prepare and run a participatory training.

The following parts of this M&E chapter present details on the M&E sessions and provide suggestions for running the exercises.

<sup>1</sup> [http://www.oecd.org/document/26/0,3343,en\\_2649\\_34361\\_44096282\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/26/0,3343,en_2649_34361_44096282_1_1_1_1,00.html)

<sup>2</sup> <http://www.oecd.org/environment/environment-development/integratingclimatechangeadaptationintodevelopmentplanningapractice-orientedtrainingbasedontheoecdpolicyguidance.htm>



## Training format

The new modules on adaptation M&E can be run as **part of the overall training course** covering also other topics of the adaptation process or in a **stand-alone format** focusing entirely on adaptation M&E. The stand-alone training is targeted at **individuals who are involved in designing monitoring and evaluation systems for adaptation at (sub)national level (Module 6a) or project/programme level (Module 6b)**. For an in-depth coverage of the M&E modules a good understanding of climate change adaptation is required. Furthermore, it is recommended that participants have some background knowledge on M&E in general. The time required for the different training formats is shown in **Table 1**.

Format	Modules	Time required
Stand alone	6, 6a	2 days
M&E training	6, 6b	2 days
	6, 6a, 6b	3 days
As part of the full course	1-5, 6, 6a or b	4.5 days
	1-5, 6, 6a & 6b	5 days

Further details about the different training formats are provided in the publication *Tailor made training courses on climate change adaptation – A cookbook for different formats and target groups* which can be downloaded alongside all other modules of the training on the OECD Environment and Development Website (see link in footnote 2).

**Table 1: Times required per training format**

Specific materials for the stand-alone M&E training including a [comparative study of ten national adaptation M&E systems](#) with overview factsheets as well as a [two page description of the M&E training](#) are available on AdaptationCommunity.net → Knowledge → M&E → Tools and Trainings or → Further reading.

## Training Methodology

The course is based on the Harvard Case Method, which conveys teaching messages mainly through **interactive practical work by trainees**.<sup>3</sup> The training deals with the fictitious Federal Republic of Zanadu, a situation closely based on real life conditions and challenges. For the M&E Modules, additional case situations outside Zanadu with special relevance to the subject have been developed.

**All sessions follow the same sequence**, including the following crucial **elements**:

- The **introduction**, given by the trainer, provides the necessary theoretical background and introduces participants to the case work.
- The **case work** gives participants the opportunity to work through the different aspects linked to climate change adaptation in a systematic manner. Participants assume the roles of 'case work experts' in charge of the specific session's task.
- The 'case work experts' **present their results** to the plenary. This is an opportunity to share experiences and foster mutual learning. Trainers offer alternatives and corrections when necessary.
- In a **final reflection**, the participants reassume their own real-life position. They reflect on their case experiences and link them to their own work in order to make the newly gained knowledge more applicable. Trainers provide support through guiding questions.

<sup>3</sup> See e.g. <http://harvardmagazine.com/2003/09/making-the-case.html>  
<http://www.aacu.org/peerreview/pr-wi05/pr-wi05realitycheck.cfm>



### Guidance for effective group work

- For effective and efficient work, a working group should select a facilitator, a time keeper and a presenter.
- Allow sufficient time to read through the task description and see if everybody is on board.
- The working groups work independently.
- Trainers can be asked for advice.
- The main learning objective is to learn about the systematic approach and not to be comprehensive in the task

### Box 1: Guidance for effective group work

#### Training Package

- The **Training Manual** provides the storyline for delivering the training. It explains the case work tasks and includes all necessary supporting information for completing the exercises.
- The **Handouts** provide a summary of learning points and references for each session.
- The **Trainer's Handbook** consists of two parts. Part I presents basics on participatory training methodology and the Case Method and gives hands-on guidance on developing a good training course agenda. Part II provides detailed information as well as suggestions on running the modules and Action Learning exercises.
  - The document at hand is the **special chapter on the new adaptation M&E modules** and supplements Part II. Part I of the overall trainer's handbook should be consulted as well.
- A library of **PowerPoint Slides** with notes for the introductory presentations.
- Specifically for the M&E modules, **method briefs** and **factsheets** describing applications of existing M&E systems at national and sub-national level can be used to learn from real cases and reflect the content of the M&E sessions. These additional M&E materials are available on AdaptationCommunity.net under 'Knowledge' → [M&E](#).

The training manual, handouts, trainer's handbook and presentation slides can be downloaded free of charge at: <http://www.oecd.org/dac/environment/climatechange>.<sup>4</sup>

#### About the development of the M&E modules

The new M&E modules were developed by the team of the project *Inventory of Methods for Adaptation to Climate Change* (IMACC) together with the *Climate Protection Programme for Developing Countries*. The training was piloted in Mexico in May 2013 with participants from all seven IMACC countries (the workshop report is available on AdaptationCommunity.net under *Exchange* → [Workshops and Trainings](#)). Experiences from the pilot training have been used to refine the exercises and are also included in the detailed session descriptions below. In 2013, further trainings involving government officials have taken place in Grenada and Mozambique. For feedback on the M&E modules please contact [Timo.Leiter@giz.de](mailto:Timo.Leiter@giz.de).

<sup>4</sup> Direct link: <http://www.oecd.org/environment/environment-development/integratingclimatechangeadaptationintodevelopmentplanningapractice-orientedtrainingbasedontheoecdpolicyguidance.htm>



# Structure of the M&E modules

## Background on the new M&E modules

Until mid-2013, the OECD training included module 6 'Develop an M&E framework' as part of the 4-step climate proofing approach. This module introduced the concept of results chains but did not sufficiently highlight the adaptation-specific M&E aspects. The decision to update and extend the previous module 6 was also driven by strong demand for capacity building on M&E of adaptation in the international arena, partly as a result of increasing volumes of climate finance. GIZ therefore developed an M&E training that could be integrated into the existing OECD adaptation training as well as being used as a specialised stand-alone training.

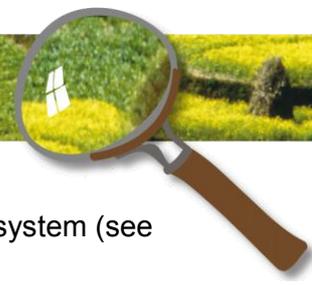
## Rationale for the distinction between project and national module

[GIZ's experience in supporting numerous countries in the development process of national adaptation M&E systems](#) has shown that there is **no uniform approach or methodology** that could be recommended irrespective of the context. Other than at the project level, where results chains and associated indicators mark the standard approach to M&E, national level M&E approaches have a far greater variety due to different purposes and national contexts. For example, some national adaptation strategies do not include specific adaptation measures let alone results chains, but act merely as a mandate for line ministries to start their own mainstreaming efforts and adaptation plans (examples of this are South Africa and Germany). Classical results chains may not be suitable in such circumstances. For instance, the [M&E system of the German national adaptation strategy](#) is based on a set of climate change impact and response indicators for each of its 15 priority fields of action. However, there are no underlying results chains linking these indicators within or across fields of action. In the UK, the Climate Change Committee, an independent advisory body to the government, publishes annual adaptation progress reports which provide a detailed examination of adaptation barriers and enablers for specific climatic risks such as flooding or water scarcity. It is because of these differences and the resulting need for tailor made approaches for M&E at national level that it was decided to develop two separate modules on adaptation M&E together with a general introduction:

- Module 6: **Introduction to adaptation M&E**
- Module 6a: M&E for adaptation at the **national/subnational** level
- Module 6b: M&E for adaptation at the **project/programme** level

**Module 6** introduces the topic and describes purposes and challenges of adaptation M&E.

**Module 6a** introduces a general framework to develop national M&E systems and starts with an exercise that helps participants articulate the specific context of an M&E system, i.e. what its purpose is and who the intended users of the information are. The framework is described in detail in the [Guidance for Integrating Monitoring and Evaluation of Climate Change Adaptation into Strategies in Mongolia](#). Module 6a does not prescribe results chains as general approach to M&E. Instead it leaves the question of the appropriate method open and focuses on the development and quality check of indicators, because indicators are part of most M&E systems irrespective of what underlying approach is used. Module 6a concludes with a real case session that allows participants to reflect on what they have learned based on practical examples of existing adaptation M&E systems. To facilitate this, comparative factsheets of adaptation M&E systems have been developed and are available at [AdaptationCommunity.net](#) under *Knowledge* and [M&E](#). In session 8, participants can apply their newly gained knowledge to their particular work context. This ses-



sion can be extended to a workshop on developing a (sub)national adaptation M&E system (see p. 35 for further details).

**Module 6b** introduces GIZ's five step approach to design adaptation projects and results-based monitoring systems and is based on the guidebook "[Adaptation made to measure](#)" (first published in August 2012, updated in November 2013, available in English, French, German and Spanish). In the following exercises, participants develop a results chain and associated indicators. Module 6b concludes with a session to apply to newly gained knowledge to participants real work context.

The modules are further divided into different **sessions** (1-13) as shown in the figure below.

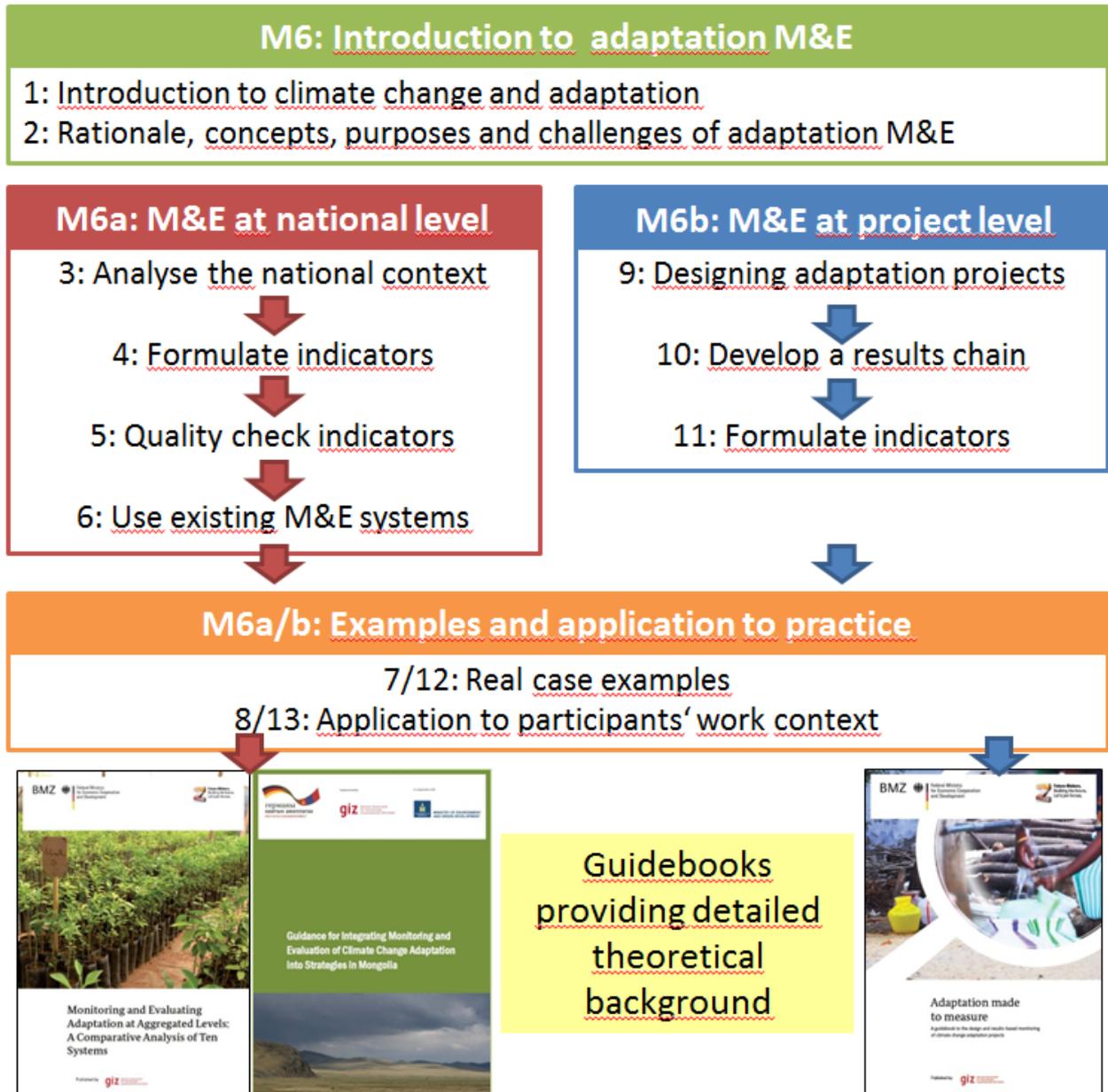


Figure 1: Structure of the M&E Modules



# Modules 6 / 6a / 6b

## Adaptation Monitoring & Evaluation (M&E)

The four step generic approach to operationalising adaptation as outlined in the [OECD policy guidance](#) includes Monitoring & Evaluation (M&E) as it's fourth step. M&E of adaptation is covered in module 6 which in the revised format consists of three (sub)modules:

- Module 6: Introduction to adaptation M&E
- Module 6a: M&E for adaptation at the **national/subnational** level
- Module 6b: M&E for adaptation at the **project/progamme** level

Module 6 'Introduction to adaptation M&E' replaces the previous module 6 called 'Developing an M&E framework' that was used until mid-2013. **Modules 6a and 6b are supplementary modules** that can be run in addition if the training course wants to put a particular emphasis on M&E. **Modules 6a and 6b are independent of each other**, i.e. running module 6b does not require running 6a before. However, modules 6a or 6b should always be used in combination with the introductory module 6.

Modules 6 / 6a / 6b
<b>Main learning objectives</b>
Become familiar with <ul style="list-style-type: none"> <li>- rationale, potentials and challenges of adaptation M&amp;E.</li> <li>- processes to develop an effective M&amp;E system as part of adaptation planning</li> <li>- specific approaches for M&amp;E at the national and project level.</li> <li>- developing adaptation-specific indicators and ensure their quality.</li> </ul>
<b>Further learning objectives</b>
<ul style="list-style-type: none"> <li>- The diversity of contexts requires tailor-made M&amp;E systems</li> <li>- M&amp;E needs to be embedded into administrative structures and policy making processes</li> <li>- M&amp;E goes beyond accountability by supporting learning from experiences and thus contributing to increased effectiveness of adaptation measures.</li> </ul>
<b>Terminology</b>
Monitoring, evaluation, response / result indicators, results, output, outcome, impact, inventory of monitoring systems
<b>Link with other modules</b>
Requires <ul style="list-style-type: none"> <li>- Understanding of principles of adaptation.</li> </ul> Is linked to <ul style="list-style-type: none"> <li>- 'Adaptation terminology' (action learning)</li> <li>- The vulnerability factors defined in M3 'Assess vulnerability'.</li> <li>- M6b (project-level) is linked to the adaptation measures selected in M5 'Select adaptation measures'.</li> </ul>



# Module 6: Introduction to adaptation M&E

## Session 1\*: Introduction to climate change and adaptation

*\* If the M&E modules are conducted as part of the complete OECD training course which already includes an introduction to adaptation then this session is not applicable.*

The **purpose** of this session is to:

- Provide an overview of the greenhouse effect and its consequences for humans and natural systems
- Introduce the concept of adaptation to climate change and its relevance for development
- Make participants familiar with the terminology used for adaptation

The introduction to climate change, adaptation and its terminology is very important to bring participants on the same page and to ensure that the following sessions are understood and that the exercises can be completed by all participants. Depending on the degree of knowledge and experience of the particular audience of a training event this introductory session can be extended (see suggestions below). Thus, session 1 is flexible to be adjusted to the particular audience. Even if the audience seems quite familiar with adaptation, there should always be an introduction to adaptation as this also serves as an introduction to the group work and thus eases collaboration in the following sessions.

The **standard introduction** includes:

- **An introductory presentation.** This presentation can be adjusted to the context of the training, e.g. supplemented by examples of adaptation or by projected impacts on the respective geographical region.
- **An action learning exercise on adaptation terminology** (see annex 1 for a detailed description)
- **An exercise ('corner game') about barriers to adaptation.** This exercise is not a prerequisite for other exercises in the following sessions and therefore can be replaced by other introductory activities (e.g. as part of the extended introduction described below).

Standard introduction		
Element	Time required	Description
Introductory presentation + Questions	25 minutes	This presentation is a slightly shortened version of the introductory presentation used in Module 1.
Action learning terminology	45 minutes	Introduces the terminology around vulnerability and adaptation in an interactive way.
Corner game on barriers to adaptation	45 minutes	Participants discuss four categories of barriers to adaptation.
<b>Overall</b>	115 minutes + breaks	

Table 2: Standard introduction to climate change and adaptation

For an **extended introduction**, **Module 1 'Apply a climate lens'** can be conducted in combination with the adaptation terminology exercise. Module 1 provides a detailed introduction to climate proofing by analysing which parts of Zanadu's National Development Plan may be affected by



climate change. Times required for the different introductory elements are shown in the table below. The extended introduction based on Module 1 has the advantage that participants become familiar with case work around Zanadu and can easier relate to it in the following sessions (they would otherwise be introduced to Zanadu in session 3 or session 9).

Extended introduction		
Element	Time required	Description
Module 1 'Apply a climate lens' including introductory presentation	135+45 minutes	Detailed introduction to adaptation. Participants go through a climate proofing process of Zanadu's National Development Plan (includes introduction to Zanadu which reduces time needed in session 3).
Action learning terminology	45 minutes	Introduces the terminology around vulnerability and adaptation in an interactive way
<b>Overall</b>	<b>225 minutes + breaks</b>	

Table 3: Extended introduction to climate change and adaptation

The decision which of the two introduction formats (standard or extended) to use should be based on:

- a) The experience and background knowledge a particular group of participants has on adaptation to climate change.
- b) The time available for the overall training
- c) The objective of the training

A detailed description of **Module 1 'Apply a climate lens'** is provided in appendix 2.

### Short animated movie on Climate Change Adaptation

GIZ and the Potsdam Institute for Climate Impact Research jointly developed the short animated movie

***"We know enough about climate change: It's time for decisions now!"*** (5:42 minutes).

The movie fits nicely to the introduction session as it explains climate change and its impacts and illustrates adaptation options. The movie can be used for example at the start of session 1. Experience has shown that the audience connects very well to the film and it is a good way to supplement the introductory presentation of the standard or extended introduction.



The movie is available in 12 languages and can be viewed online at [AdaptationCommunity.net](http://AdaptationCommunity.net) under *Knowledge* and [5 minute film about adaptation](#). It is recommended to also download the movie to make sure it runs smoothly in case of unstable or slow internet connections. A [link to download the movie](#) is also provided on AdaptationCommunity.net.



## Handout session 1

# Introduction to climate change adaptation

**Climate change is a core development issue and presents risks to the achievement of Millennium Development Goals.** This requires development that is both low carbon (renewables, efficiency, and land management for carbon storage) and climate-resilient (adaptation).

**Adaptation is a complementary risk management strategy to mitigation.** There is a need to reduce exposure (i.e. mitigate greenhouse gas emissions in order to 'avoid the unmanageable'), and also insure against potential negative effects (i.e. adaptation activities to 'manage the unavoidable').

**Adaptation is cross-cutting.** Dealing with climate change requires responses in key areas (e.g. agriculture, water), as well as integrated planning and budgeting (such as land use planning, social policy) and financing over the near and long term for both urgent and strategic investments.

**Political interest in climate change is growing, and the need for adaptation is increasingly being recognised.** In many countries, climate change impacts are evident and adaptation is increasingly being recognized as a priority area for policy development. In some countries, there is still a need to clarify that adaptation is a part of sustainable development and to provide evidence of the benefits of anticipatory action. In some countries, climate change and adaptation are highly political issues.

**Development cooperation needs to address climate change impacts.** A significant proportion of technical and financial support is sensitive to climate change impacts or related to positive opportunities. Development agencies have to assess their portfolios to make sure they take climate change impacts into account. GIZ uses the [Environment and Climate Assessment](#) for this purpose.

There is **broad international consensus among scientists** about the key dynamics of climate change and many impacts on terrestrial and ocean systems are already evident. Global average temperatures have risen 0.74° C since the early 1900s, with 11 of the last 12 years (to 2006) ranking among the 12 warmest years on record. Sea level rose by 1.8 mm per year over 1961 to 2003, and about 3.1mm per year from 1993 to 2003, and snow cover has declined dramatically. (See IPCC Fourth Assessment Report on Climate Change 2007)

### References

IPCC (2013): Climate Change 2013: The Physical Science Basis. Summary for Policymakers. [http://www.climatechange2013.org/images/uploads/WGIAR5-SPM\\_Approved27Sep2013.pdf](http://www.climatechange2013.org/images/uploads/WGIAR5-SPM_Approved27Sep2013.pdf)

OECD (2009): Policy Guidance - *Integrating Climate Change Adaptation into Development Cooperation*. [http://www.oecd.org/document/26/0,3343,en\\_2649\\_34361\\_44096282\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/26/0,3343,en_2649_34361_44096282_1_1_1_1,00.html)

OECD (2005): Bridge Over Troubled Waters: Linking Climate Change and Development. Executive Summary. <http://www.oecd.org/env/cc/36174361.pdf>

For knowledge and application examples of adaptation visit:





## Session 2: Introduction to adaptation M&E: rationale and challenges

The **purpose** of this session is to introduce adaptation Monitoring & Evaluation (M&E):

- Rationale, benefits, importance in the adaptation process
- Challenges of measuring adaptation
- Different levels of application: national, project/programme and portfolio level

Suggestions for running session 2						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	0	20	20	35	20	95
Necessary reading	Task description and Matrix 1.					
Intro	Introductory ppt (optional: short Q&A session after the ppt, may add 10 minutes) Explain task					
Case work	<p><u>Setting</u></p> <ul style="list-style-type: none"> <li>- Ask participants to work with their neighbour in a 'whisper group'</li> </ul> <p><u>Task</u></p> <ul style="list-style-type: none"> <li>- Based on matrix 1 participants chat their neighbour on whether they have experienced any of the listed challenges. If so, they are asked to describe the situation and whether the challenge has been addressed and how.</li> <li>- Note: participants may refer to work experiences made outside of the thematic area of climate change. If those experiences are relevant (e.g. convincing superiors of the importance of a new topic) then they can still be included.</li> <li>- Ask participants to write short descriptions on cards for use in the results presentation</li> </ul>					
Presentation of results	<p><u>Method</u></p> <p>Joint moderated presentation and reflection of results in the plenary. Draw matrix 1 on a pinboard. At the beginning of the exercise ask participants to pin their cards in the relevant cells of the matrix. This also provides you with a good overview for the discussion.</p> <p>For the presentation of results, ask participants to outline their experienced challenge as concise as possible (some participants are inclined to provide lengthy background explanations which could take a lot of time – try to prevent this).</p> <p>Steer the discussion towards the <b>relevance of these challenges for adaptation M&amp;E</b>. If the discussion drifts towards general problems like a principle lack of funding, ask participants what this means for developing and setting up adaptation M&amp;E systems.</p> <p><u>Guiding questions for moderated discussion:</u></p> <ul style="list-style-type: none"> <li>- Which challenges are most common?</li> <li>- Have participants used different ways to deal with the same challenge?</li> <li>- Are the presented coping techniques specific to the situation or are they transferable to other contexts?</li> <li>- Which challenges are most difficult to cope with?</li> <li>- Which challenges are well known also from other contexts and which ones are more specific to climate change issues?</li> </ul>					



<p>Reflection</p>	<p><u>Method</u> Facilitated discussion with the whole group</p> <p><u>Content</u> The theme for the reflection is: <b>what do these challenges mean for monitoring and evaluating climate change adaptation?</b></p> <p>The reflection should connect the introductory presentation to the discussion on challenges and stimulate participants’ thinking and interest in the following sessions. Since the exercise did already discuss participants real work context, the reflection can build on it by exploring what these challenges mean for adaptation M&amp;E. Two aspects are:</p> <ul style="list-style-type: none"> <li>• Design of monitoring methods / systems need to address these challenges conceptually</li> <li>• Some challenges will particularly affect the implementation of M&amp;E, e.g. in regard to cooperation between different agencies or data providers, resources for monitoring etc.</li> </ul> <p>You can start an open discussion with the overall question ‘<b>what do these challenges mean for monitoring and evaluating climate change adaptation?</b>’ and then focus on the two aspects above.</p> <p>End the reflection by stating that these aspects will be further explored in the following sessions in module 6a or 6b. The <b>road map development</b> (sessions 8 or 13) will also be about how to deal with these challenges in a particular context.</p>
<p>Additional info</p>	<p>The exercise is based on participants’ real work context and not on the fictitious case of Zanadu (highlight this if Zanadu has been used before, e.g. if module 1 has been used as part of the extended introduction in session 1).</p> <p>The exercise mainly addresses one aspect of the introduction, namely challenges of measuring adaptation. If the discussion gets to a point where you have the feeling they think ‘why are we doing this if it is so difficult?’ then remind them of the <b>rationale and benefits of adaptation M&amp;E</b> which were highlighted in the introductory presentation (e.g. learning from experience, getting to know where progress in reducing vulnerability is being made, steer planning, provide accountability for funding).</p>
<p>Preparation</p>	<p>Familiarise yourself with the introductory ppt Prepare a board with the outline of matrix 1</p>



## Handout Session 2

### Introduction to Adaptation M&E

#### Rationale

- Monitoring and Evaluation of adaptation to climate change can help identifying what works well and why and thus assist in making the adaptation process more effective.
- Adaptation M&E can be used to examine whether a country, sector or community has become more adapted to the future projected impacts of climate change.
- Demonstrating results of adaptation can help secure financial resources from national as well as from international funding sources such as multilateral climate funds.

#### Main lessons learned

The **purposes and potential benefits** of adaptation M&E are:

- **Learning:** Understanding what works well, i.e. what leads to well adapted communities/countries/policies etc.
- **Steering of activities:** Support management under uncertainty, track implementation of plans and policies
- **Demonstrating results:** Accountability and means to acquire additional funding
- **International reporting:** Gather information for use in international reporting, e.g. national communications to the UNFCCC

Adaptation M&E can have a particular focus on one or more of these purposes which needs to be reflected in the design of the M&E system. For example, if the focus is on learning what processes or measures have worked well and why then a mere list of high level indicators without further in-depth analysis of the mechanisms behind the changes would not be sufficient.

The **major challenges of measuring adaptation** to climate change are:

- **No universal metric to measure adaptation:** success of adaptation is context specific. Other than for mitigation, which can be expressed in avoided tons of greenhouse gases (GHG), there is no standardized metric for adaptation.
- **Uncertainty in climate and socioeconomic developments:** Uncertainty in future climate projections and associated climate change impacts, particularly at local level, make it difficult to measure effectiveness.
- **Complexity:** oftentimes climatic stressors are only one of multiple drivers of change which altogether influence the vulnerability of people or ecosystems. Thus, when measuring the effectiveness of adaptation a whole range of social, economic and ecologic factors have to be taken into account.
- **Long time horizons:** Since climatic changes are occurring over multiple decades, ultimately success of adaptation can only be determined after a time frame that spans beyond the lifetime of typical development projects or programmes.



## References

GIZ (2013): **Closer look at Monitoring and Evaluating (M&E) of Adaptation**. Published by the project “Inventory of Methods for Adaptation to Climate Change” (IMACC). Available on [www.AdaptationCommunity.net](http://www.AdaptationCommunity.net) under M&E.

Bours, D. et al. (2014): Guidance Note 1: **Twelve reasons why climate change adaptation M&E is challenging**. Published by UKCIP & SEChange. Available at: <http://www.seachangepop.org/node/2728>

GIZ (2013): **National Monitoring and Evaluation (M&E) of Climate Change Adaptation**. Available at: <http://star-www.giz.de/fetch/bw44PMq1G00Q000bXo/giz2013-0532en-climate-national-monitoring-evaluation.pdf>



# Module 6a: M&E for adaptation at national / subnational level

## Session 3: Describe the context of a national M&E system

The **purpose** of this session is to:

- introduce a systematic process of developing a national M&E system
- present key questions to analyse the context of an M&E system, e.g. what is the objective, who will use its results?
- illustrate the variety in national contexts (message: there is no one size fits all approach to adaptation M&E)

Suggestions for running session 3						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	10-15*	15	30	30	15	100-105
Necessary reading	After the introduction, before the start of the exercise: <ul style="list-style-type: none"> <li>• Exhibit 1a / 1b, Figures 3 and 4, *Introduction to Zanadu (if not introduced before)</li> </ul> If Zanadu has not been introduced before, there should be a quiet reading time before people are being allocated into groups. This ensures that everyone has had some time to read over the introduction and the exhibits.					
Intro	Introductory ppt, Introduction to Zanadu ppt (if not already introduced earlier) Explain task					
Case work	<u>Setting</u> <ul style="list-style-type: none"> <li>- Divide participants in sub-groups of about 4 persons each</li> <li>- Each sub-group works separately on <u>either</u> Zanadu <u>or</u> Khoesia</li> <li>- If possible have an equal number of sub-groups working on Zanadu and on Khoesia</li> </ul> <u>Task</u> <ul style="list-style-type: none"> <li>- Participants discuss the questions in Matrix 2</li> </ul>					
Presentation of results / wrap-up	<u>Method</u> Joint moderated reflection of results in the plenary Draw matrix 2 on a pinboard and add the responses during the discussion (see figure 2 for an example) <u>Guiding questions for moderated discussion:</u> <ul style="list-style-type: none"> <li>- Which answers did you find? Do the answers differ for the same country? If so, why?</li> <li>- In how far do answers differ between Zanadu and Khoesia and what are the reasons?</li> <li>- How does this relate to your own working experiences?</li> </ul>					
Reflection	<u>Method</u> Joint moderated reflection of results in the plenary. You may show figure 2 (five step process of developing an M&E system) on the screen and present the four key questions of step 1 on a flip chart (the questions are in matrix 2).					



	<p><u>Content</u></p> <p>The purpose is to reflect on the five step process of developing a national M&amp;E system and the key questions of step 1 (matrix 2) in light of participants' real work or country context. Questions to facilitate the discussion:</p> <ul style="list-style-type: none"> <li>• Who (which national institutions/organisations) should be involved in discussing the key questions of step 1?</li> <li>• At which step of the five-step process do participants see their home country (referring the development of a national adaptation M&amp;E system)?</li> <li>• What is participants' opinion/reflection on the five-step process?</li> <li>• Which existing national processes are relevant for the development of a national adaptation M&amp;E system (e.g. existing monitoring systems, planning and budgeting systems)</li> </ul> <p>You can close by pointing out that these aspects will be further discussed in the following sessions:</p> <ul style="list-style-type: none"> <li>• Step 3: Sessions 4 and 5</li> <li>• Step 4: (partially) in session 6</li> <li>• Steps 1-5: session 8 (road map development)</li> </ul>
<p>Additional info</p>	<p><u>Observations from the pilot training in May 2013:</u></p> <p>Some participants struggled with the exercise for two reasons:</p> <ul style="list-style-type: none"> <li>- If participants are unaware of an example of a national adaptation M&amp;E system they may find it difficult to imagine one and therefore difficult to work on the questions</li> <li>- If this exercise is the first time they do case work with Zanadu they may find the exercise too abstract, particularly since the background information given to answer the questions is limited.</li> </ul> <p>To counter these, it is recommended to do the following:</p> <p>In a stand-alone training, if possible familiarize participants with the Zanadu case work before Session 3, e.g. by working on Module 1 ("Climate lens") as part of the extended introduction (see session 1 above).</p> <p>Regarding the limited background information, the purpose of the task is to get participants think through the key questions as a first step of developing an M&amp;E system. In the instructions the trainer can explain that the exercise is about this thought process and emphasis that it is not necessary (or even possible given the limited information) to develop an all-encompassing answer, e.g. how an institutional set-up of an M&amp;E system could look like in detail.</p>
<p>Preparation</p>	<p>Familiarise yourself with the introductory ppt</p> <p>Prepare boards with the outline of matrix 3 (see figure 2)</p> <p>Background reading exhibit 3a / 3b, Figures 3 and 4, Introduction to Zanadu</p>



<p>Page 26 Context for the M&amp;E system</p>	<p>Zanzadu: Rough adapt. framework/climate proofed nat. dev. plan</p>	<p>Khoresia: Fully developed Nat. Adaptation Plan (CCAPAK) (A)</p>
<p>Objective of M&amp;E system</p>	<p>- to assess mainstreaming efforts both national and local government. - coordination of policies - convergence - integration * specifically in the agricultural sector Water &amp; sanitation &amp; energy infrastructure</p>	<p>- Measured effectiveness of climate change actions ++ Agriculture Actns. ++ Watershed management. ++ touristic sectors <i>Learning process for plan improvement</i></p>
<p>What should be measured (indication fields such as results, activities, vulnerab.?) (scheme p. 30)</p>	<p>How to measure vulnerabilities? * Measure exposure, sensitivities</p>	<p>* to reduce soil deterioration * <del>reduction</del> protection of habitations * How to measure the responses and the results of the activities.</p>
<p>Who are users of the generated information?</p>	<p>Policy makers and planners - Ministries</p>	<p>Communities and <del>the</del> local politicians</p>
<p>Recommendations regarding institutional set-up?</p>	<p>* To have a interministerial structure * Comprehensive measure plan C.B. FOR ANALYSIS. * Systematization of data bases and information. c.B = Capacity Building → Capacities improvement.</p>	<p>Scaling down to the communities and extending to other sectors.</p>

Figure 2: Example of matrix 2 used for the discussion of results

The columns in figure 2 include some of the group work results (Note: these answers are just examples from the groups and should not be considered as sample responses).



## Handout Session 3

### Describe the context of a national M&E system

#### Rationale

- M&E system development can be understood as a process in several stages (see figure 3 below). At the beginning of this process (step 1), it is essential to **define the context** including the goal of the M&E system, what exactly should be measured, the potential user and the institutional setting into which the M&E system will be imbedded. These **four key aspects of step 1** are the subject of session 3 and are described in matrix 2 of the training manual.

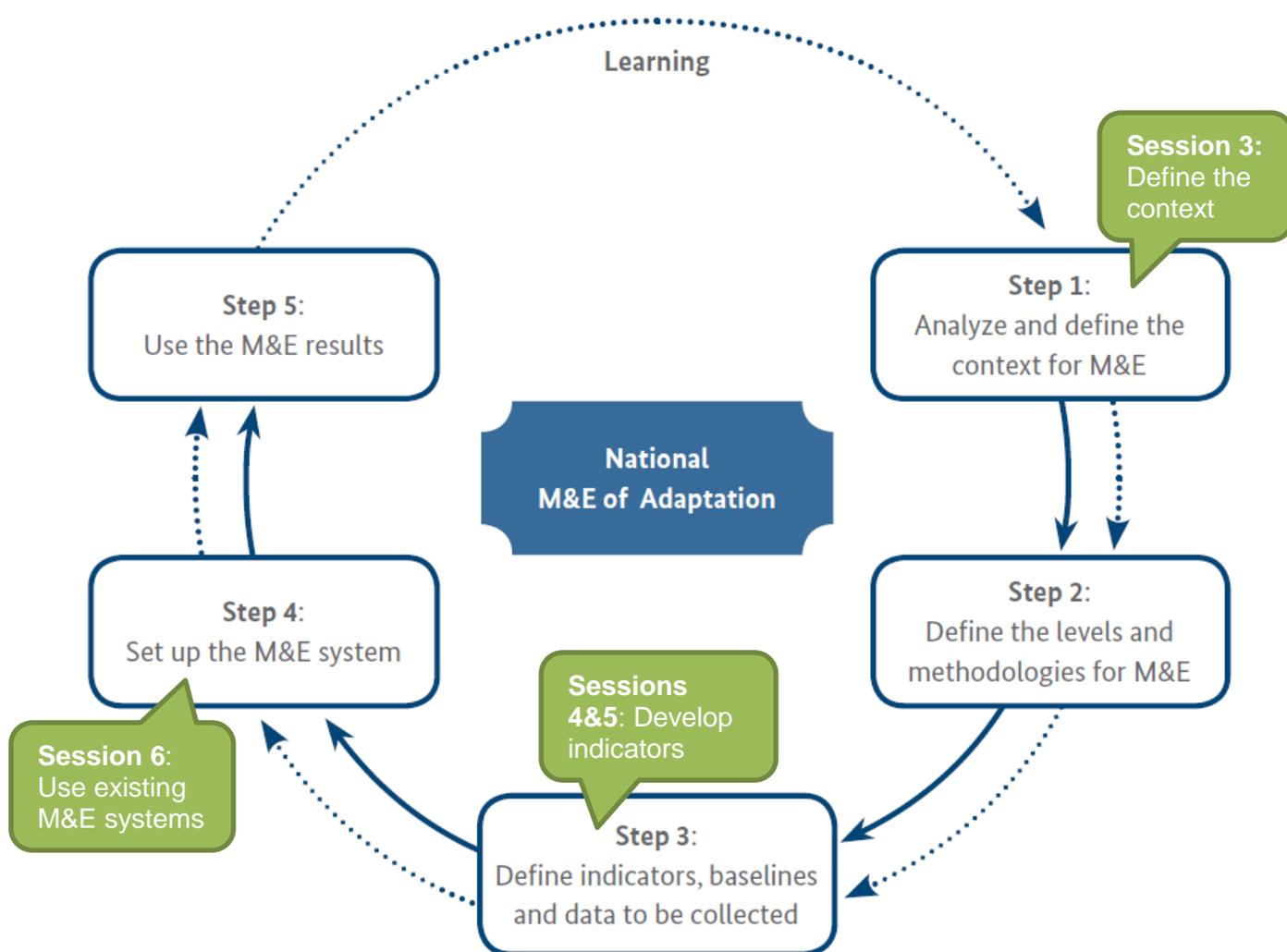


Figure 3: GIZ's Approach for Developing and Implementing M&E for Adaptation on the National Level and associated training sessions. Source: GIZ (2013b).



## Main lessons learnt

- There is no 'one-size-fits-all' solution. Clarity on the purpose and goals of the M&E system greatly assists its development.
- M&E systems can focus on different aspects, for example: effectiveness of CCA measures; learning what works well; understanding how CC impacts evolve over time or promotion of accountability and transparency

It is important to **specify what exactly the system is monitoring**. The following categories can be distinguished:

- Climate parameters, e.g. change in precipitation, temperature, sea level rise
  - Climate change impacts, e.g. occurred damages, service outages due to storms
  - Vulnerability, e.g. number of buildings in flood prone areas, knowledge and capacity of emergency services. Vulnerability includes the components *exposure*, *sensitivity* and *adaptive capacity* (IPCC, 2001).
  - Tracking of adaptation activities, i.e. what adaptation activities are taking place and by whom; are plans being implemented?
  - Monitoring adaptation results: are adaptation actions effective in reaching their objectives and/or in reducing vulnerability?
- It is important to consider how the information generated by the M&E system can reach the target audience, e.g. how it can inform policy making on adaptation
  - M&E development and implementation should be organized as a participatory process involving different stakeholders.

## References

GIZ (2013a): **Recommendations for adaptation M&E in practice**.

[https://gc21.giz.de/ibt/var/app/wp342deP/1443/wp-content/uploads/filebase/me/me-guides-manuals-reports/GIZ-2013\\_Recommendations\\_for\\_adaptation\\_MaE\\_in\\_practice.pdf](https://gc21.giz.de/ibt/var/app/wp342deP/1443/wp-content/uploads/filebase/me/me-guides-manuals-reports/GIZ-2013_Recommendations_for_adaptation_MaE_in_practice.pdf)

IISD & GIZ (2013): **Monitoring and Evaluating Adaptation at Aggregated Levels: A Comparative Analysis of Ten Systems**. [https://gc21.giz.de/ibt/var/app/wp342deP/1443/?wpfb\\_dl=163](https://gc21.giz.de/ibt/var/app/wp342deP/1443/?wpfb_dl=163)

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<http://star-www.giz.de/fetch/bw44PMg1G00Q000bXo/giz2013-0532en-climate-national-monitoring-evaluation.pdf>

GIZ (2013c): **Integrating M&E of climate change adaptation into Strategies in Mongolia**:

<http://star-www.giz.de/fetch/bgS0XAq1F00Q000bXo/giz2013-0502en-climate-change-mongolia.pdf>

International Institute for Environment and Development (2013): **An operational framework for Tracking adaptation and measuring development**.

<http://pubs.iied.org/10038IIED.html?c=climate>

WRI & GIZ (2011): **Making adaptation count**: concepts and options for monitoring and evaluation of climate change adaptation. <http://www2.gtz.de/dokumente/bib-2011/giz2011-0219en-monitoring-evaluation-climate-change.pdf>



## Session 4: Define indicators

The **purpose** of this session is to:

- Let participants experiment with indicator formulation for given CC impact and adaptation responses in order to develop a feeling for formulating indicators
- Demonstrate that different indicators are possible for the same CC impact or adaptation response (message: there is often not one 'natural' indicator)
- Create sensitivity that different indicator formulations may focus on different aspects and thus measure different things (message: careful indicator formulation is important)

Suggestions for running session 4						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	5	10	30	40	0	85
Necessary reading	Before the case work: Exhibits 2a or 2b					
Intro	Session intro ppt Explain task					
Case work	<ul style="list-style-type: none"> <li>- Organize case work in whisper groups (pairs of 2 or 3, suggestion: ask people who sit next to each other to form groups)</li> <li>- Each whisper group works either on Zanadu or Khoesia (try to ensure an equal number for each country)</li> <li>- Whisper groups write indicators on cards</li> </ul>					
Presentation of results / wrap-up	<p><u>Method</u></p> <ul style="list-style-type: none"> <li>- Prepare pin boards with the matrixes 3a and 3b</li> <li>- Ask participants to pin the cards on the pin boards</li> <li>- As the font size of the writing might be small and difficult to see from distance, ask participants to gather around the pin boards for the discussion</li> <li>- Facilitate a discussion: ask participants to explain their indicators and discuss differences among the proposed indicators</li> <li>- Start with the CC impact indicators for both countries and then move on to the adaptation response indicators.</li> </ul> <p><u>Guiding questions for moderated discussion:</u></p> <ul style="list-style-type: none"> <li>- Which example indicators did you suggest?</li> <li>- In how far do indicators suggested for the same impact or response differ? What implications do these differences have for measuring impacts or adaptation responses? (they are likely to measure different aspects)</li> <li>- What was most difficult about formulating indicators?</li> <li>- How does this relate to your own working experiences?</li> </ul>					
Reflection	Joint reflection after session 5					



<p>Additional info</p>	<p>Whilst indicators are the most well-known elements of M&amp;E, often times participants have only limited experience in formulating indicators. The rationale of the exercise is to let people experiment with formulating indicators and getting a feeling for the difficulties involved. The provided CC impacts and adaptation responses have been deliberately chosen to evoke different indicator proposals.</p> <p><u>Observations from the pilot training in May 2013:</u></p> <ul style="list-style-type: none"> <li>- Participants generally enjoyed the exercise and there was lively discussion within and amongst the groups. Some participants had difficulties with formulating indicators per se or for particular CC impacts or adaptation responses, for example for “Apply climate proofing to upcoming National Water Policy”.</li> <li>- It is recommended that the trainers go around during the entire time of the exercise and assist in case participants have difficulties with any one of the indicators.</li> <li>- The joint discussion of the indicators is particularly important in this session as it showcases to participants the differences in indicator proposals made by the groups and provides a forum to discuss them. This also demonstrates the need for quality criteria for indicators which are introduced in the next session.</li> <li>- The discussion has taken more time than originally expected as there was substantial discussion on almost all indicators.</li> </ul>
<p>Preparation</p>	<p>Familiarise yourself with the session intro ppt                  Prepare boards with matrix 3a and 3b                  Background reading exhibit 2a / 2b</p>



## Handout Session 4

### Define indicators

#### Rationale

- Indicators can refer to different focus areas like climate change impacts, implementation progress of adaptation activities or achievement of adaptation results.
- Indicators describe how progress can be assessed and are therefore important elements of an M&E system.

#### Main lessons learnt

- Often times numerous possible indicators can be formulated even for the same CC impact or adaptation response.
- The wording of indicators determines what is being measured. It is therefore important to carefully formulate indicators.
- It is often more difficult to determine indicators for adaptation responses than for climate change impacts.

In some cases, the exercise in session 4 led to general ideas on what to monitor rather than exact indicators. Robust indicators require cross-checking with the SMART rule which will be introduced in the next session.

#### References

Bours, D. et al. (2014): Guidance Note 2: **Selecting indicators for climate change adaptation programming**. Published by UKCIP & SEChange. Available at: <http://www.seachangecop.org/node/2806>

GIZ (2013): **Adaptation made to measure**. A guidebook to the design and results-based monitoring of adaptation projects. Second edition. [https://gc21.giz.de/ibt/var/app/wp342deP/1443/wp-content/uploads/filebase/me/me-guides-manuals-reports/GIZ-2013\\_Adaptation\\_made\\_to\\_measure\\_second\\_edition.pdf](https://gc21.giz.de/ibt/var/app/wp342deP/1443/wp-content/uploads/filebase/me/me-guides-manuals-reports/GIZ-2013_Adaptation_made_to_measure_second_edition.pdf)

The guidebook is accompanied by a **repository of adaptation indicators** from adaptation projects from a variety of sectors. The repository is organised in an excel file which is easily searchable: [https://gc21.giz.de/ibt/var/app/wp342deP/1443/?wpfb\\_dl=153](https://gc21.giz.de/ibt/var/app/wp342deP/1443/?wpfb_dl=153)

OECD (2012): Monitoring and evaluation for adaptation: lessons from development cooperation agencies. <http://www.oecd-ilibrary.org/content/workingpaper/5kg20mj6c2bw-en>



## Session 5: Indicator quality check

The purpose of this session is to:

- help participants formulate robust indicators by applying the SMART rule which describes quality criteria for indicators
- enable participants to formulate indicators that specify the results of adaptation

Session 5 builds directly on the results of session 4. Both sessions should therefore be run after each other on the same day.

Suggestions for running session 5						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	5	10	30	45	15	105
Necessary reading	Before the case work: SMART Rule (Box 2 in training manual); for groups working on Khoresia: also matrix 4					
Intro	Session intro ppt Explain task					
Case work	<ul style="list-style-type: none"> <li>- Divide participants in sub-groups (if possible use the same groups as in session 4)</li> <li>- Sub-groups work either on Zanadu or Khoresia (try to ensure an equal number for each country)</li> <li>- Those working on Zanadu work with the indicators which they formulated in session 4 in matrix 3a (which is why it is suggested to keep the same groups). They can enter their indicator suggestions from session 4 into <b>matrix 5</b>.</li> <li>- Those working on <b>Khoresia</b> look at the proposed indicators of <b>matrix 4</b> which relate to the priority area 'food security' of the CCAPAK.</li> <li>- <b>Task:</b> In their groups participants discuss whether their indicators of matrix 3a (for groups working on Zanadu) or the proposed indicators of matrix 4 (for groups working on Khoresia) comply with the SMART criteria and if not, how they can be improved.</li> </ul>					
Presentation of results	<p><u>Method</u></p> <ul style="list-style-type: none"> <li>- Joint moderated reflection of results in the plenary.</li> <li>- Prepare pin boards with matrixes 4 and 5 and ask participants to add their cards with proposed changes. For matrix 5, participants need to re-use their cards from session 4 with their initial proposed indicators.</li> <li>- Discuss both matrixes in turn.</li> <li>- <b>Since there are 14 indicators overall</b> (+ possibly different varieties of initial indicator proposals by the Zanadu groups) <b>the discussion can become quite lengthy. Keep an eye on the time spend per indicator.</b></li> </ul> <p><u>Guiding questions for moderated discussion:</u></p> <ul style="list-style-type: none"> <li>- Which indicators follow the SMART rule, which don't, and why?</li> <li>- What improvements would you suggest to better comply with the SMART criteria?</li> </ul>					



<p>Reflection</p>	<p><u>Method</u></p> <ul style="list-style-type: none"> <li>- Joint moderated reflection of results in the plenary</li> <li>- Keep note of important reflections on a board</li> </ul> <p><u>Guiding questions for moderated discussion:</u></p> <ul style="list-style-type: none"> <li>- In how far do the indicators proposed in the exercise differ from 'normal' development indicators?</li> <li>- What makes an indicator adaptation-specific?</li> <li>- Who should be involved in formulating indicators of an adaptation M&amp;E system?</li> <li>- How does this relate to your own working experience?</li> </ul>
<p>Additional info</p>	<p>The indicators of matrix 4 have been deliberately worded to not be fully compliant with the SMART rules. For example, the proposed indicator for activity 1.1.1 "Number of insured people" is not specific as to what they are insured against nor does it specify the timeframe.</p> <p>For adaptation response indicators it is of particular importance that they are specific in regard to the benefits of adaptation.</p> <p><u>Observations from the pilot training in May 2013:</u></p> <p>The discussion of the indicators took quite a long time (almost an hour). Participants were very active in contributing to the discussion of their indicators and developed a sense of how the SMART criteria can be applied. This discussion was deemed very valuable for learning and worth the time.</p> <p>The SMART rule was among the takeaways most often mentioned in the training evaluation and was rated as very useful to the participants' work context.</p>
<p>Preparation</p>	<ul style="list-style-type: none"> <li>- Module intro ppt</li> <li>- Familiarise yourself with the SMART rule (Box 2 in training manual) and be prepared to give examples for SMART indicators</li> <li>- Prepare boards with matrix 4 and 4</li> <li>- For Zanadu: Transfer indicator cards from session 4</li> </ul>



## Handout Session 5

### Indicator quality check

#### Rationale

- It is challenging to come from first ideas on monitoring areas to consistent M&E systems including robust indicators. The SMART Rule is a powerful tool to check the quality of indicators.

#### Main lessons learnt on formulating indicators

- Careful formulation of indicators is important for multiple reasons:
  - the exact formulation is the basis for the measurement of an indicator.
  - a precise formulation aids unambiguous interpretation.
- Indicators should be accompanied by:
  - Baseline value: value at the start of the intervention,
  - Target value: intended value at the end of the intervention; milestones for specific times during the intervention can also be specified,
  - Time horizon: by what time are the target value and milestones intended to be achieved?,
  - Spatial reference: what geographic area does the indicator refer to?,
  - Means of verification: specification of how the indicator values will be verified.
- The **SMART rule** is a useful way to test the quality of an indicator:
  - ⇒ **S**     **Specific:** the indicator is valid and describes the underlying issue.
  - ⇒ **M**     **Measurable, practicability:** rely on sound data obtained through reproducible methods independent from the individual collectors of the information.
  - ⇒ **A**     **Attainable:** the target value and milestones of an indicator should be realistic.
  - ⇒ **R**     **Relevant:** address an important issue for the users related to the M&E objective.
  - ⇒ **T**     **Time-bound:** related to time and milestones so that progress can be shown during the course of implementation
- **Adaptation indicators** are not necessarily different from ‘normal’ development indicators. What makes them **adaptation-specific** is the context in which they are applied. For example, the indicator “stabilised yields from a certain crop in a certain area and time” could be an adaptation indicator if the yields are under stress from climate change or variability and if measures are taken to reduce those stressors (e.g. different farming techniques, different seeds).
- Conversely, tracking the uptake and **implementation of adaptation measures** typically does require tailored adaptation indicators as these particular actions are unlikely to be covered by existing development indicators. For example, if a project aims for households to use water more efficiently, then an indicator about households’ changing behaviour in response to climate change information would likely be a new and adaptation-specific indicator. A development indicator like “water use per person” which may already be monitored could be used in addition to measure the development outcomes of the adaptation intervention.



- Indicators which aim to address the effectiveness of adaptation should be specific about how vulnerability is reduced or adaptive capacity increased.
- When formulating indicators, already consider what data is required to measure them. Some indicators involve several sources of information.

### **Main lessons learnt on developing an M&E system**

- Involving all major authorities and specialized bodies in indicator development is important to ensure acceptance and smooth operationalization (since the data is collected by numerous bodies).
- The question of what should be measured is often influenced by various interests.
- Consider the available resources and capacities when developing an M&E system and its indicators.
- Identify key indicators which are able to picture crucial features of the whole system at a glance.
- Use as much as possible indicators from existing monitoring systems, especially for climate impact monitoring (compare session 6).
- Think about a 'core' M&E system to start with, which can gradually be extended. Restrict your systems to the resources available and make sure that it still provides important indications on the success of your adaptation process.

### **References**

See references in the handouts of sessions 3 and 4.



## Session 6: Use existing M&E systems

The purpose of this session is to:

- explain the rationale of examining the relevance of existing data and monitoring system for adaptation M&E to a) save resources and b) utilise and link to existing monitoring and reporting structures (where appropriate)
- Illustrate how existing data or monitoring systems may be combined or adjusted to become more relevant for adaptation M&E

Suggestions for running session 6						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	5	10	30	30	15	90
Necessary reading	Before the case work: Exhibit 3					
Intro	Session intro ppt Explain task					
Case work	<ul style="list-style-type: none"> <li>- Divide participants in sub-groups of 3-4 people (this time you may change groups)</li> <li>- All groups work on Khoesia</li> <li>- Participants are asked to <b>examine the inventory of data and monitoring systems</b> (exhibit 3) and complete matrix 6 in order to:                             <ul style="list-style-type: none"> <li>- assess which of the listed monitoring systems might be most relevant for a national adaptation M&amp;E system based on their knowledge of climate change impacts in Khoesia (exhibit 1b)</li> <li>- make suggestions as to how existing data systems can be adjusted to become more useable for adaptation purposes, e.g. that data on yields for important crops are available for every seasons and not just as an annual figure.</li> </ul> </li> </ul>					
Presentation of results	<u>Method</u> <ul style="list-style-type: none"> <li>- Joint moderated reflection of results in the plenary</li> </ul> <u>Guiding questions for moderated discussion:</u> <ul style="list-style-type: none"> <li>- Which existing M&amp;E systems did you identify as being relevant for adaptation?</li> <li>- Which potentials for adjustments did you identify?</li> <li>- How does this relate to your own working experience?</li> </ul>					
Reflection	<u>Method</u> <ul style="list-style-type: none"> <li>- Joint moderated reflection of results in the plenary</li> </ul> <u>Content: guiding questions</u> <ul style="list-style-type: none"> <li>- <b>Which challenges might arise from linking to existing M&amp;E systems</b> (e.g. issues of data ownership, limited interest in cooperation, inflexible reporting structures, dysfunctional systems)?</li> <li>- Does an inventory of M&amp;E systems exist in your country / work context? If not, who should be involved in developing it?</li> <li>- What examples do you know of data or monitoring systems that are already connected to other M&amp;E systems (either in the environmental field or in other topic areas) in your country or work context?</li> </ul>					
Preparation	<ul style="list-style-type: none"> <li>- Familiarise yourself with the session intro ppt and exhibit 3</li> <li>- Prepare boards with matrix 6 (see Training Manual)</li> <li>- Background reading exhibit 1b (climate change in Khoesia)</li> </ul>					



## Handout Session 6

### Use existing M&E systems

#### Rationale

- Resources and capacities to collect and manage data and report on it are limited.
- There might be resistance towards launching new monitoring activities as monitoring and reporting regulations are often perceived as a burden.
- Existing M&E systems and structures can be useful to inform adaptation M&E.

#### Main lessons learnt

- Wherever possible and appropriate, make use of or try to link to existing and well-functioning M&E systems. However, take into account possible challenges such as data ownership or unreliable data quality.
- Existing M&E systems will usually not be operated under adaptation aspects but might still have relevance to it. For example, data on crop yields can be highly relevant as it may show fluctuations due to climate variability. Combinations of different existing data sources and/or slight adjustments in the monitoring systems can be useful for adaptation M&E. For example, combining data on crop yields with data on climate variability and with information on possible adaptation measures may be used to assess the effectiveness of these measures.
- Several countries have made good experiences in starting the development of their national adaptation M&E system with an 'inventory' of existing M&E systems, e.g. the Philippines and Grenada. It provided an overview of where they can get data from that is relevant to adaptation and which existing M&E systems they can potentially link to.
- To obtain data from local or regional level the cooperation among different levels of government (national – regional – local) needs to be well coordinated.

#### References

GIZ (2014): **Building upon existing M&E and Data Systems for the development of M&E Systems for Climate Change Adaptation. A step-wise guidance.** Available on Adaptation-Community.net under [M&E](#).

See also further references in the Handouts of sessions 3, 4 and 5.



## Session 7: Real case reflection

### Context

The purpose of the real case reflection is to learn from existing M&E examples at national level (i.e. this session does not use the case of Zanadu or Khoesia). Participants can explore how challenges and approaches analysed in previous exercises are dealt with in practice. The rationale is to **learn from real adaptation M&E systems** and their development processes at (sub-)national level.

### Available input

Specifically for this purpose, GIZ has compiled an **overview of national-level adaptation M&E systems** in the form of a report, factsheets and method briefs which are available on AdaptationCommunity.net → Knowledge → [Monitoring and Evaluation](#). As of November 2013, these include descriptions of the adaptation M&E systems from the following countries: *France, Germany, Kenya, Morocco, Nepal, Norway, the Philippines and the United Kingdom* as well as a description of the results framework and key indicators of the *Pilot Programme for Climate Resilience (PPCR)* and the *Mekong River Commission*. The factsheets are part of a study by IISD and GIZ (2013): [Monitoring and Evaluating Adaptation at Aggregated Levels: A Comparative Analysis of Ten Systems](#).

Additional material may be provided by the trainers or by trainees. If participants of the training represent different countries and/or are familiar with specific national adaptation M&E systems, they could present these approaches to the group.

### Analysis frameworks for national adaptation M&E systems

To analyse the national cases, the **standardised structure describing the national M&E system** in the factsheets of the comparative analysis by IISD & GIZ 2013 can be used (see table below):

Category	Content
<b>Context</b>	<b>Policy context:</b> adaptation policy background and mandate for M&E
	<b>Purpose</b> of the M&E system
	<b>Level of application</b> (national or subnational) and <b>level of aggregation</b>
	<b>Current status:</b> stage of development or operation
<b>Process</b>	<b>Institutional arrangements:</b> who is responsible, who is involved?
	<b>Establishment process:</b> how was the system developed?
	<b>Implementation process:</b> how is it being implemented?
<b>Content</b>	<b>Approach:</b> what approach or methodology is used for the M&E system?
	<b>Indicators:</b> what types of indicators are being used?
	<b>Data and information requirements:</b> what information is needed to measure the indicators?
	<b>Output and reporting:</b> what are outputs of the M&E system and how is the information being used?
	<b>Resources:</b> What resources are needed for the development and ongoing operation of the M&E system?

Table 4: Structure to analyse national level adaptation M&E systems.



Alternatively, participants can refer to an **M&E analysis template** which was developed for the GIZ [M&E pilot workshop in Mexico](#). The template has three focal areas:

1. National context with regard to adaptation in general and starting point for M&E
2. The development process of a national adaptation M&E system
3. Design and operationalisation

For each of these focal areas a number of questions guide the trainees through the process of analysing and comparing different M&E systems. The M&E analysis template can be downloaded at [AdaptationCommunity.net](#) → Knowledge → [Monitoring and Evaluation](#) (or contact [Timo.Leiter@giz.de](mailto:Timo.Leiter@giz.de)).

### Setting

There are different options how the real case reflection session can be conducted. A number of relevant examples of national M&E systems can be chosen by participants and/or the trainers, be presented to the group and analysed and discussed in small groups. The table below illustrates a possible option to run session 7. Overall, session 7: *Real case reflection* can be tailored to the specific purpose and target audience of the training course.

Suggestion for running session 7						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	20-30	15	30	30	15	110-120
Necessary reading	Before the group work: Factsheets on 2 or more national M&E systems and information on the case analysis framework.					
Intro	Introduction of the purpose of the session Presentation of the analysis framework Explain task					
Group work	<ul style="list-style-type: none"> <li>- Divide participants in sub-groups of 3-4 people</li> <li>- Every group is provided with information on 2-3 national M&amp;E systems (depending on the time available) and asked to examine and compare the adaptation M&amp;E systems based on the analysis framework. Each national case can be given to two groups so that there are enough people to comment during the discussion.</li> </ul>					
Presentation of results	<u>Method</u> <ul style="list-style-type: none"> <li>- Presentation by participants (maximum 4 presentations to keep in time): for each national case (or for selected ones in case of limited time) one group who analysed this case presents the results in a five minute presentation to the whole group. The audience can then ask questions.</li> <li>- Key features of each system should be noted on a pinboard based on the main categories of the analysis framework so that participants can compare the systems.</li> <li>- The presentations can be followed by a joint moderated reflection of the similarities and differences of the national systems.</li> </ul>					



<p>Reflection</p>	<p><u>Method</u></p> <ul style="list-style-type: none"> <li>- Joint moderated reflection in the plenary.</li> </ul> <p><u>Guiding questions</u></p> <ul style="list-style-type: none"> <li>- What have you learned for the development of a national adaptation M&amp;E system in your country?</li> <li>- What should be considered when developing a national adaptation M&amp;E system?</li> </ul>
<p>Additional info</p>	
<p>Preparation</p>	<ul style="list-style-type: none"> <li>- Familiarise yourself with the national adaptation M&amp;E examples provided in the study by IISD and GIZ (2013) which is a very helpful background literature.</li> <li>- Familiarise yourself with the analysis framework</li> <li>- Choose most relevant cases in advance. Alternatively, ask participants which cases they want to learn more about. Participants may also present details of national adaptation M&amp;E systems they are familiar with. This should be arranged in advance of the session.</li> <li>- Decide how best to run the session given the objectives and participants of the particular training course.</li> </ul>



## Session 8: The way forward (road-map development)

The purpose of session 8 is to transfer learning from the training to participants' own work context and to have participants develop **next steps after the training**. Session 8 is therefore important to the **sustainability of the training**. Ideally, the training is embedded in a capacity development process and/or aligned with ongoing in-country processes (e.g. a climate change mainstreaming strategy) to ensure that the training will have a longer lasting effect. The role of the training in reaching the objectives of the commissioning party and the according selection of participants should be considered in the development of the training programme (see Part I Chapter 7 of the comprehensive trainer handbook).

Similar to session 7, session 8 can be **tailored to the specific context, audience and objectives of the training**. One option is to have participants work through the steps or potential challenges of developing and setting up an adaptation M&E system as outlined in matrix 7. This option is described in the table below.

Suggestions for running session 8						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	0	10	30	25	0	65
Necessary reading						
Intro	<ul style="list-style-type: none"> <li>- Add task description the way you decide to run it</li> <li>- Explain session rationale to participants (next steps after the training)</li> </ul> <p><u>Optional:</u></p> <ul style="list-style-type: none"> <li>- For trainings which are focused on a particular country: get an input from government representatives on how the training fits to the climate change programme or intentions of government and how participants may get support in utilising what they have learned (add time accordingly)</li> </ul>					
Case work	<ul style="list-style-type: none"> <li>- Divide in Sub-groups of 3-4 people, if possible combine people who will work together or people from the same country (in case of a multi-country training)</li> <li>- Each group should work through the steps/challenges listed in matrix 7 and brainstorm ideas / next steps on how to address these in their context</li> </ul>					
Presentation of results	<p><u>Method</u></p> <p>The way the presentation is run depends on whether participants are from the same context/country or from different contexts (e.g. from different countries where each group would focus on next steps in their country). If participants are from the same context a moderated discussion could work through matrix 7 row by row and ask the groups for their suggestions on each. If each group focused on different countries then a short presentation of results for each group could be more suitable (beware of timing and relevance of takeaways for the entire group).</p>					
Additional info	<p>The session on roadmap development can be extended into a <b>workshop</b> towards the development of a national or subnational adaptation M&amp;E system. The workshop brings together relevant stakeholders from national level and elaborates in more detail how a M&amp;E system can be developed. This setup has been successfully tested in Mexico (compare workshop report at Adaptation-Community.net → Exchange → <a href="#">Workshops &amp; Trainings</a>).</p>					
Preparation	<p>Familiarise yourself with the context participants will refer to. Possibly engage national resource persons to act as sounding board to participants suggestions.</p>					



# Module 6b: M&E for adaptation projects and programmes

## Session 9: Designing adaptation projects

The purpose of this session is to:

- demonstrate the importance of planning to connect adaptation needs with adequate activities and a useful monitoring system
- illustrate how the M&E system is based on project's objectives and planning

Suggestions for running session 9						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	10	15	30	20	10	85
Necessary reading	Before the case work: Exhibits 4 and 5					
Intro	Session intro ppt Explain task					
Case work	<ul style="list-style-type: none"> <li>- Divide participants in sub-groups of 3-4 people</li> <li>- Participants are asked to <b>prepare an implementation plan</b> based on the questions of matrix 8</li> <li>- Ask participants to write key points on cards</li> </ul>					
Presentation of results	<u>Method</u> <ul style="list-style-type: none"> <li>- Joint moderated discussion of results in the plenary</li> </ul> <u>Guiding questions for moderated discussion:</u> <ul style="list-style-type: none"> <li>- What is the adaptation context the pilot projects aim to address?</li> <li>- Which activities need to be undertaken to conduct the pilot applications?</li> <li>- How could the success of the pilot applications be assessed?</li> </ul>					
Reflection	<u>Method</u> <ul style="list-style-type: none"> <li>- Joint moderated reflection in the plenary</li> </ul> <u>Content: guiding questions</u> <ul style="list-style-type: none"> <li>- What do you see as important for planning adaptation projects?</li> <li>- How can planning lay the foundation for the M&amp;E system?</li> </ul>					
Preparation	<ul style="list-style-type: none"> <li>- Familiarise yourself with the session intro ppt and exhibits 4 and 5</li> <li>- Background reading on climate change in Zanadu: exhibit 1a</li> </ul>					

## Session 10: Development of a results chain

The purpose of this session is to:

- Illustrate the development of a results chain consisting of outputs and outcomes as a means to spell out what a project intends to do
- Explain the method of a results chain as basis for an M&E system and subsequent indicator development



Suggestions for running session 10						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	0	10	25	25	0	60
Necessary reading						
Intro	Session intro ppt, Explain task					
Case work	<ul style="list-style-type: none"> <li>- Divide participants in sub-groups of 3-4 people (use same groups as in previous session)</li> <li>- Participants are asked to <b>develop one outcome and two outputs for each component</b> (matrix 9). Important: they are not asked to develop indicators yet – this will only be done in the next session.</li> <li>- Ask participants to write their results on cards</li> </ul>					
Presentation of results	<p><u>Method</u></p> <ul style="list-style-type: none"> <li>- Joint moderated reflection of results in the plenary</li> </ul> <p><u>Guiding questions for moderated discussion:</u></p> <ul style="list-style-type: none"> <li>- Which outcomes and outputs have been chosen and why?</li> <li>- In how far do outcomes and outputs differ by group?</li> </ul>					
Additional info	The relation of this session to session 9 is: the three components described in matrix 9 are how the pilot applications will be conducted. This may differ from what groups suggested as implementation plan in session 9.					
Reflection	Joint reflection at the end of session 11					
Preparation	<ul style="list-style-type: none"> <li>- Familiarise yourself with the session intro ppt and matrix 9</li> <li>- Prepare boards with matrix 9</li> </ul>					

## Session 11: Development of indicators

The purpose of this session is to:

- help participants formulate robust indicators by applying the SMART rule which describes quality criteria for indicators
- enable participants to formulate indicators that specify the results of adaptation

Suggestions for running session 11						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	5	15	25	30	15	110
Necessary reading	Before case work: boxes 3 and 4					
Intro	Session intro ppt , Explain task					
Case work	<ul style="list-style-type: none"> <li>- Divide participants in sub-groups of 3-4 people (use same groups as in previous session)</li> <li>- Participants are asked to <b>develop one indicator for each outcome and output</b> they suggested in session 10 (matrix 9) and check whether this indicator complies with basic quality criteria (the SMART rule)</li> <li>- Ask participants to write their results on cards</li> </ul>					



Presentation of results	<p><u>Method</u></p> <ul style="list-style-type: none"> <li>- Joint moderated discussion of results in the plenary</li> </ul> <p><u>Guiding questions for moderated discussion:</u></p> <ul style="list-style-type: none"> <li>- Which indicators have been chosen and why?</li> <li>- In how far do indicators differ by groups?</li> </ul>
Additional info	
Reflection	<p><u>Method</u></p> <ul style="list-style-type: none"> <li>- Joint moderated reflection of results in the plenary</li> <li>- Keep note of important reflections on a board</li> </ul> <p><u>Guiding questions for moderated discussion:</u></p> <ul style="list-style-type: none"> <li>- What has been most difficult in formulating ‘SMART’ indicators?</li> <li>- What makes an indicator adaptation-specific?</li> <li>- How does this relate to your own working experience?</li> </ul>
Preparation	<ul style="list-style-type: none"> <li>- Familiarise yourself with the session intro ppt, Boxes 3&amp;4 and matrix 10</li> <li>- Be prepared to provide examples of SMART indicators</li> <li>- Prepare boards with matrix 10</li> </ul>

## Session 12: Real case reflection

### Context

The purpose of the real case reflection is to learn from existing M&E examples at project or programme level (i.e. this session does not use the fictitious case of Zanadu or Khoesia anymore). Participants can explore how challenges and approaches analysed in previous exercises are dealt with in practice. The rationale is to learn from real adaptation M&E systems and their development process.

### Available input

There are different options how the real case reflection can be conducted. A number of relevant examples can be chosen by participants and/or the trainers, be presented to the group and analysed and discussed in small groups. GIZ’s guidebook *Adaptation made to measure* includes an example results framework from an adaptation project in India. The accompanying [repository of adaptation indicators](#) can be used to illustrate possible adaptation indicators for a variety of sectors. Other project examples can be found for instance

- in the project proposals to the **Adaptation Fund** each of which includes a detailed results framework ([https://www.adaptation-fund.org/funded\\_projects](https://www.adaptation-fund.org/funded_projects))
- in the project descriptions of the **Strategic Climate Change Fund** of the Global Environment Facility: <http://www.thegef.org/gef/sccffsp>
- In the adaptation project database of the **ci:grasp platform**: <http://adamcat.pik-potsdam.de/QueryAdaptationDB>

Additional material may be provided by the trainers or by trainees. If participants are familiar with a results framework of an adaptation project, they could present it to the group.



## Analysis framework

If a number of suitable examples from adaptation projects/programmes have been identified (in advance), participants can analyse the examples according to the following aspects:

- **Adaptation context:** what is the particular problem/vulnerability the project is addressing?
- **Adaptation measures:** what does the project intend to do to address the problem? Does it seem plausible that the project can contribute to reducing vulnerability?
- **Results framework / underlying method for M&E:** how does the project intend to measure its results? What method does it use for M&E (e.g. a results chain with indicators)?
- **Indicators:**
  - How well do the indicators address the intended aims and results of the projects? In other words: what exactly do the indicators measure? Are they able to describe in how far the project contributed to adaptation?
  - Do they comply with the SMART criteria?
- **Operationalisation:**
  - What data is needed to measure the indicators and how could this data be collected (e.g. through existing data sets, participatory methods, interviews)
  - How is the development of indicator values being analysed and by whom?
  - How are the results of the monitoring documented and presented? For example, are written reports prepared? Are they accessible to a relevant audience?
  - Who is responsible for the monitoring?
- **Knowledge management:**
  - In how far is the M&E system embedded in project management? For example, is the information generated by the monitoring used to inform ongoing project management?
  - Who is the target audience of the information generated by the M&E system?
  - Are lessons learned about adaptation shared with other projects and/or with a wider community of relevant people? Are main results of the project publicly accessible?

The **five-step approach** outlined in GIZ's guidebook [Adaptation made to measure](#) discusses these aspects in more detail. Please note that the results model proposed in step 3 of Adaptation made to measure slightly differs from the classical results chain outlined in session 11. The difference is that GIZ's results model does not differentiate between different categories of results such as outputs or outcomes. Instead it just describes the links between different results among each other and how they contribute to the project objective. The second edition of the guidebook from November 2013 is available at [AdaptationCommunity.net](http://AdaptationCommunity.net) → Knowledge → Monitoring and Evaluation → [Further reading](#). It is also available in [Spanish](#) and French. For questions about the guidebook please contact [Timo.Leiter@giz.de](mailto:Timo.Leiter@giz.de) or [Julia.Olivier@giz.de](mailto:Julia.Olivier@giz.de).



### Setting

There are different options how the real case reflection session can be conducted. A number of relevant examples of project M&E systems that address adaptation can be chosen by participants and/or the trainers, be presented to the group and analysed and discussed in small groups. The table below illustrates a possible option to run session 12. Overall, session 12: *Real case reflection* can be **tailored to the specific purpose and target audience** of the training course.

Suggestion for running session 12						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	30	15	30	30	15	120
Necessary reading	Before the group work: Information about 2 or more M&E examples (to be prepared in advance by trainers or participants) and information about the analysis framework to be used in the group work.					
Intro	Introduction of the purpose of the session Presentation of the analysis framework Explain task					
Group work	<ul style="list-style-type: none"> <li>- Divide participants in sub-groups of 3-4 people</li> <li>- Every group is provided with information on 2-3 adaptation projects and their M&amp;E systems (depending on the time available) and asked to examine and compare the adaptation M&amp;E systems based on the analysis framework. Each case could be given to two groups so that there are enough people to comment during the discussion.</li> </ul>					
Presentation of results	<p><u>Method</u></p> <ul style="list-style-type: none"> <li>- Presentation by participants (maximum 4 to keep in time): for each case (or for selected ones in case of limited time) one group who analysed this case presents the results in a five minute presentation to the whole group. The audience can then ask questions.</li> <li>- Key findings from each example can be noted on a pinboard based on the aspects of the analysis framework so that participants can compare the M&amp;E systems.</li> </ul>					
Reflection	<p><u>Method:</u> Joint moderated reflection in the plenary.</p> <p><u>Guiding questions</u></p> <ul style="list-style-type: none"> <li>- What have you learned for the development of a project adaptation M&amp;E system?</li> <li>- In how far do the chosen M&amp;E system and the indicators enable to demonstrate whether adaptation has taken place?</li> </ul>					



Preparation	<ul style="list-style-type: none"> <li>- Decide how best to run the session given the objectives and participants of the particular training course.</li> <li>- Select suitable adaptation projects and M&amp;E systems in advance or contact participants before the training for examples from their work context</li> <li>- Familiarise yourself with the analysis framework</li> <li>- GIZ's guidebook Adaptation made to measure (2013) is a very helpful background literature</li> </ul>
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### Session 13: Road map development

The purpose of session 13 is to transfer learning from the training to participants' own work context and to have participants develop **next steps after the training**. Session 13 is therefore important to the **sustainability of the training**. The role of the training in reaching the objectives of the commissioning party and the according selection of participants should be considered in the development of the training programme (see Part I Chapter 7 of the comprehensive trainer handbook).

Similar to session 12, session 13 can be **tailored to the specific context, audience and objectives of the training**. One option is to have participants work through the steps or potential challenges of developing and setting up an adaptation M&E system as outlined in matrix 11. This option is described in the table below.

Suggestions for running session 13						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	0	10	30	25	0	65
Necessary reading						
Intro	<ul style="list-style-type: none"> <li>- Add task description the way you decide to run it</li> <li>- Explain session rationale to participants (next steps after the training)</li> </ul>					
Case work	<ul style="list-style-type: none"> <li>- Divide in Sub-groups of 3-4 people, if possible combine people who will work together or who work on similar projects or backgrounds</li> <li>- Each group should work through the steps/challenges listed in matrix 11 and brainstorm ideas / next steps on how to address these in their context</li> <li>- Each group should write key points on cards</li> </ul>					
Presentation of results	<p><u>Method</u></p> <ul style="list-style-type: none"> <li>- Moderated group discussion. Go through matrix 11 row by row and ask groups which key points they have found. Ask them to share only their most relevant points with the group to avoid running over time (particularly if there are many groups).</li> </ul>					
Additional info	The session on roadmap development can be extended into a <b>workshop</b> towards the development of a project adaptation M&E system, ideally as part of the project planning phase.					
Preparation	Familiarise yourself with the context/projects participants will refer to. Prepare boards with matrix 11 where participants can add their cards.					



# Annex 1: Action learning ‘Adaptation Terminology’

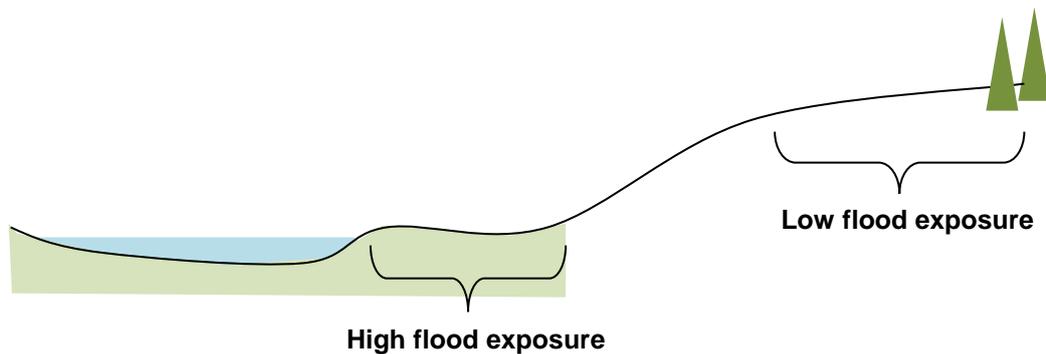
<b>Main learning objectives</b>
<ul style="list-style-type: none"> <li>- Understand key terms related to climate change vulnerability.</li> <li>- Learn how to use exposure, sensitivity and adaptive capacity terms to create different vulnerability scenarios.</li> <li>- Learn how to identify these factors in a situation and identify which factors can be easily improved to reduce vulnerability.</li> </ul>
<b>Further learning objectives</b>
<ul style="list-style-type: none"> <li>- There are easily understandable steps towards the basic concepts of vulnerability.</li> </ul>
<b>Terminology</b>
Exposure, sensitivity, impacts, adaptive capacity, vulnerability, system of interest
<b>Link with other modules</b>
<u>Requires</u> -
<u>Is linked to</u> -
<u>Lays the foundation for</u> - M3: provides the necessary terminology



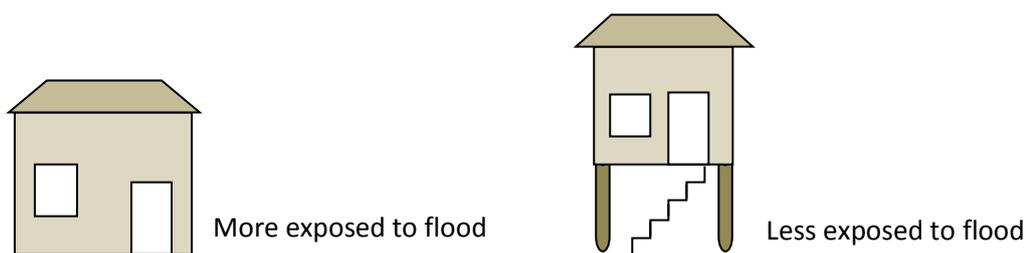
Suggestions for running the module						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	0	15	15	0	15	45
Necessary reading	No extra time needed					
Intro	<p><u>Module</u></p> <ul style="list-style-type: none"> <li>- Identify a climate-related stress that has local relevance: e.g. flood</li> <li>- Clarify that the action learning exercise will not focus on all relevant stresses in a system, just one</li> <li>- Describe a scene (and a system of interest) where one area is more likely to experience the climate stress than another, in other words: Two areas that have different levels of exposure to the selected stress. Use the <b>Exposure</b> card to label the scene</li> <li>- Describe the intrinsic qualities of two houses. Ask the participants what happens to each one if they have the same exposure (same location in the picture). Define the intrinsic characteristics that determine the extent of potential damages as <b>Sensitivity</b></li> <li>- Describe two families and their physical, information, social and financial resources. Ask the participants what each family is able to do in the case of the climate stress and what the outcome might be. Define these preventive or reactive abilities as <b>Adaptive Capacity</b></li> <li>- Make different arrangements to combine the components to illustrate that the combination of factors determines <b>Vulnerability</b>. For example, the most vulnerable situation in case of flood: a family without a car or radio (low AC), living in a basic house (high S) in the floodplain (high E). The least vulnerable situation: a family with a car and bank account and radio (high AC), living in a house on stilts (low S) not in the floodplain (low E)</li> <li>- Vary each factor and discuss which scenario is more vulnerable and why: 1) a family without a car or radio (low AC), living in a basic house (high S) away from the floodplain (low E) or 2) a family without a car or radio (low AC), living in a basic house (high S) in the floodplain (high E)? Explore each component (S, AC, E), changing each factor and discussing it with participants</li> </ul>					
Case work	<ul style="list-style-type: none"> <li>- Plenary: ask for volunteers to come forward and work on the scene</li> <li>- Ask them to use the pictures to combine the components in different ways, describe the situation that they have created and evaluate vulnerability</li> <li>- Suggest additional cards for elements of adaptive capacity. Have participants explain what happens to the equation when these are involved</li> <li>- Suggest additional cards for elements of sensitivity. Have participants explain what happens to the equation when more or less sensitive elements are added</li> </ul>					
Presentation of results						



<p>Reflection</p>	<p><u>Method</u></p> <ul style="list-style-type: none"> <li>- Open discussion</li> <li>- Make sure to end the exercise with graph 4, as this lays the foundation for the subsequently used terminology</li> </ul> <p><u>Possible questions</u></p> <ul style="list-style-type: none"> <li>- Discuss how the different factors can be changed: can exposure be changed or do these farms/houses have to remain at this level of exposure? Can sensitivity be improved? Can adaptive capacity be strengthened? What is most/least difficult? Most/least costly? Most/least socially desirable? (It is most likely that exposure is difficult, impossible or not acceptable to adjust, but sensitivity and adaptive capacity can be improved)</li> </ul>
<p>Additional info</p>	<ul style="list-style-type: none"> <li>- While participants would generally want simpler terms to help them understand the concept, it is helpful to point out that getting familiar with the terminologies associated with climate change is also good to get into the language of climate change as these are commonly used terms (internationally discussed terms with an adopted definition: refer to glossary)</li> <li>- Prepare a scene that depicts a climate-related risk as relevant to the training context</li> </ul>
<p>Preparation</p>	<ul style="list-style-type: none"> <li>- Five cards with the terms: Sensitivity, Exposure, Impact, Adaptive Capacity and Vulnerability to label the different scenarios and construct the vulnerability 'function' (see Graph 4).</li> <li>- A board with a scene that depicts the possibility of a climate-related risk, e.g. flooding. (see Graph 1). ALTERNATIVE: drought, erosion, storm damage. The scene should include two different <b>exposure conditions</b> – one area that is more exposed and one less exposed, e.g. one area lies within the floodplain and the other on higher ground. ALTERNATIVE: In an arid landscape, a forested area and a denuded area could be depicted, with the denuded area indicating higher exposure to erosion and the forested area being less exposed. In a coastal zone, one area could be along the shore with another area set back from the shore at a lower exposure to storm surge.</li> <li>- Two cards that represent <b>sensitivity</b>, i.e. the intrinsic qualities of an aspect of the system that influence the affectedness from climate stressors, e.g. one house could be built on stilts and one not on flat ground. (see Graph 2) ALTERNATIVE: In the case of drought, one farm could be planted with a drought-sensitive crop like maize and the other planted with a drought-tolerant crop like millet. In a coastal zone, one house could be built from strong materials and the other from natural materials that are more sensitive to wind and rain. In the case of erosion, one type of plant could have deeper roots than another type of plant with shallow roots, which would be more sensitive.</li> <li>- Cards that represent <b>adaptive capacity</b>, i.e. assets that enable reaction or prepare for climate-related hazards, e.g. one family might own a vehicle, phone connection, while the other family has fewer physical, financial and information resources. (see Graph 3). ALTERNATIVE: In the case of drought, one farmer might own livestock and have a small irrigation system, while the other farmer has none.</li> <li>- Additional cards for sensitivity factors (e.g. different crops [flood-tolerant, flood-sensitive crops]).</li> <li>- Additional cards for adaptive capacity factors (e.g. information [forecasts], social networks [extended family, farmers' group, community group]).</li> </ul>



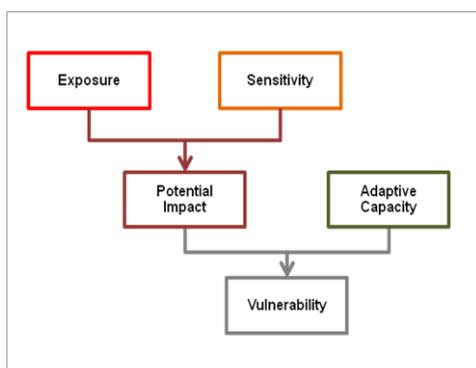
Graph 1: Scene



Graph 2: Sensitivity



Graph 3: Adaptive Capacity



Graph 4: Vulnerability functions – terminology as used in training



## Annex 2: Module 1 ‘Apply a climate lens’

<p><b>Main learning objectives</b></p> <ul style="list-style-type: none"> <li>- Understand the relevance of climate change as a topic for development cooperation.</li> <li>- Understand that adaptation is an additional cross-cutting issue in an already complex and dynamic system.</li> <li>- Learn that in order to avoid maladaptation, interventions should pass a routine check ‘the climate lens’.</li> <li>- Learn that by understanding the relevant climate change risks and opportunities policies, programmes, plans or projects can be made more climate-resilient and more supportive of adaptation.</li> <li>- Understand that ‘apply a climate lens’ is the first step of a systematic approach to adaptation; it establishes the basis for integrating adaptation into development efforts.</li> </ul>
<p><b>Further learning objectives</b></p> <ul style="list-style-type: none"> <li>- Climate lens is expected to provide a ‘feeling’ for the whole system.</li> <li>- A strategic ‘bird’s eye view’ helps to deal with complex issues step-by-step to avoid the overwhelming feeling of ‘everything relates to everything’.</li> <li>- The first step to climate change adaptation is easily done: The ‘climate lens’ can generally be applied using existing information and in a relatively short amount of time.</li> </ul>
<p><b>Terminology</b></p> <p>Adaptation, maladaptation, climate change impact, climate signals</p>
<p><b>Link with other modules</b></p>
<p><u>Requires</u></p> <ul style="list-style-type: none"> <li>- ‘Introduction to climate change adaptation’ (input ppt and discussion)</li> <li>- ‘Introduction to Zanadu’ (input ppt; individual reading time)</li> </ul> <p><u>Is linked to</u></p> <ul style="list-style-type: none"> <li>- ‘Adaptation terminology’ (action learning)</li> </ul> <p><u>Lays the foundation for</u></p> <ul style="list-style-type: none"> <li>- Detailed assessment in M3-6</li> </ul>



Suggestions for running the module						
Time consideration (min)	Reading time	Intro	Case work	Presentation of results	Reflection	All in all
	45	15+15	60	5min per group	25	135+45
Necessary reading	<u>Before module</u> - Introduction to Zanadu					
Intro	<u>Module</u> - Module intro ppt - Add task description the way you decide to run it <u>Additional items</u> - As this is the first module, explain the case method sequence - Introduce 'working rules' (see above) to ensure effectiveness					
Case work	- Divide participants in max 4 working groups at random. Try to find out participants' strength and weaknesses during M1 and M2 in order to assist effective group compositions for M3-M6 - Assign each group a slightly different task, e.g. all groups start with grid line 1 and then move on to different lines.					
Presentation of results	- Groups give brief overview of their findings <u>Additional items</u> As this is the first module - Introduce time keeping rules (3' and 1' cards to be shown) - Introduce feedback rules - Explain that trainers only give feedback when necessary <u>Additional items for discussion</u> - What additional risks may follow climate change: e.g. economic risks, humanitarian crises and conflicts, negative impact on ecosystem services? - Is the national/state plan sensitive to climate change? What are priority areas? How does climate change exacerbate problems in combination with existing (non-climate) pressures? - What issues might be most important on a shorter time horizon? A longer time horizon? Did you identify different challenges to cope with long-term/short-term effects? - Data and information needs: What studies would you need to commission? Are there issues to be monitored with increased attention?					
Reflection	<u>Method</u> - Free discussion (helps people to get used to the group) <u>Possible items</u> - Reflect participants' work experiences: Where would a 'climate lens' have contributed? Where could it be used in future? - For more see learning objectives and handout					
Preparation	- Zanadu input ppt - Module input ppt - Set 4 boards with matrix (see Training Manual)					



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