

Climate Proofing for Development

Adapting to Climate Change, Reducing Risk

gtz



On behalf of
Federal Ministry
for Economic Cooperation
and Development

Seit dem 1. Januar 2011:

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

Climate Proofing for Development

Adapting to Climate Change, Reducing Risk

Authors

Marlene Hahn, metis GmbH, Vienna

Alexander Fröde, Deutsche Gesellschaft für Technische Zusammenarbeit
(GTZ) GmbH

Published by

Deutsche Gesellschaft für Technische Zusammenarbeit
(GTZ) GmbH

Responsible

Alexander Fröde

With input from

Anselm Duchrow, Christoph Feldkötter, Anne Hahn, Nana Künkel,
Andrea Iro, Ludwig Erick Liagre, Bernd-Marcus Liss,
Nadia Manasfi, Linh Nguyen, Lorenz Petersen, Ilona Porsche,
Angelos Sanopoulos, Michael Scholze, Levke Sörensen,
Martin Tampe, Anneke Trux, Anja Weber

Production

Michael Wahl, Annette Lutz

Design

Additiv. Visuelle Kommunikation, Berlin

Photos

cover, p. 3, 9, 31, 33: Julydfg - Fotolia.com

p. 3: Kaarsten - Fotolia.com

p. 9, 22-27: PAPE / GTZ

p. 28, 29: Canakris - Fotolia.com

p. 31: GTZ / Markus Kirchgessner

p. 33: GTZ / Florian Kopp

Printed by

KlarmannDruck,
Kelkheim

Contents

Preface	2
Introduction	4
Part A) Climate Proofing for Development - Principles and elements	10
1 Approach and principles	10
2 Methodology	12
3 Technical assistance services	21
Part B) Climate Proofing for Development - Application at specific levels	22
1 National level	22
2 Sectoral level	24
3 Local level	24
4 Project level	24
Part C) Climate Proofing for Development - Lessons learnt	30
1 Feedback on Climate Proofing for Development	30
2 Success factors and recommendations	31
References	34
Acronyms	35

Preface

Decisions made today will determine the extent of future vulnerability to climate change. Development planners must now take account of the effects of climate change in policies, strategies, projects and local government plans in fields such as agriculture, forestry, urban and infrastructure development.

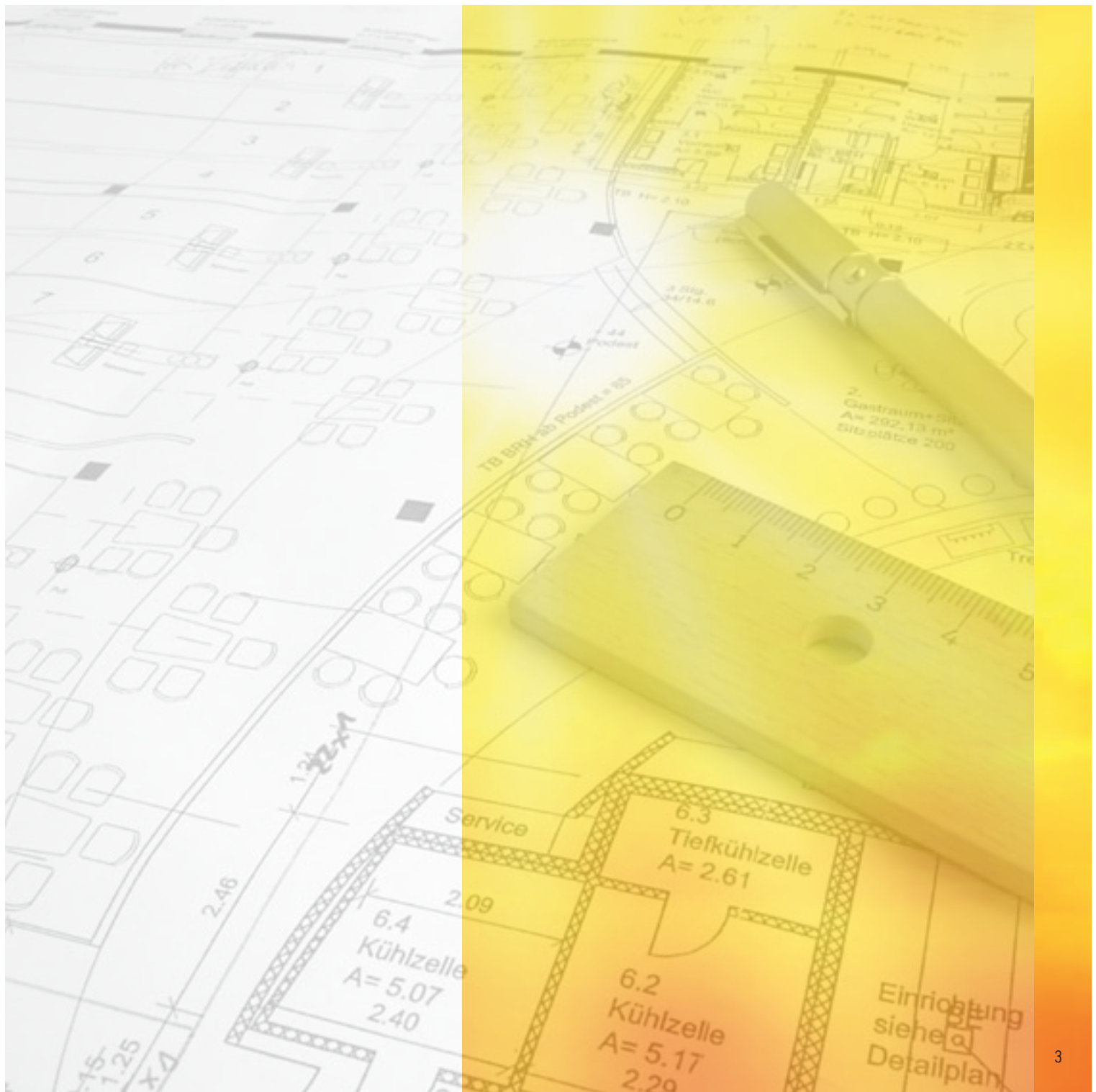
While the need for action in this regard has been clearly recognised in the development community, there is still much debate about how climate change issues should be integrated in practice in development initiatives.

At the request of partner institutions in many countries, GTZ on behalf of Germany's Federal Ministry of Economic Cooperation and Development has developed an approach named "Climate Proofing for Development". It is designed to support the integration of climate change impacts as well as awareness of the challenges and opportunities of climate change in development planning on various levels - national, sectoral, local and project.

The present brochure comprises four sections. The Introduction describes the main elements of Climate Proofing for Development. Following this, Part A introduces the methodology of the approach, while Part B presents examples of possible use at different levels, including best practices. Part C presents some lessons learnt from the Climate Proofing for Development approach.

This brochure seeks to stimulate the international debate on practical aspects of adaptation to climate change. It primarily addresses partner institutions in developing countries, practitioners, the donor community and institutions working on climate change adaptation and development planning. While its aim is to offer an overview of available approaches, it is not meant to be used as a manual. Climate Proofing for Development always requires expert support, process facilitation and tailor-made capacity development as offered by GTZ.

We hope this brochure will contribute to promoting adaptation to climate change and to making development efforts more effective.



Introduction

What is Climate Proofing for Development?

Climate Proofing for Development is a methodological approach aimed at incorporating issues of climate change into development planning. It enables development measures to be analysed with regard to

the current and future challenges and opportunities presented by climate change. It can be applied at national, sectoral, local and project level, and is making development measures on these levels more efficient and resilient. Climate Proofing for Development offers a means of identifying and prioritising options for action when adapting planning to climate change and when reviewing priorities. The approach can be applied in the planning phase or when revising plans. Properly implemented, it makes a given plan or investment more “climate-proof”.

The methodology on which Climate Proofing for Development is based was originally developed in the context of climate risk assessments developed for use within German development cooperation. It has since been further modified for application in partner institutions (mainly government bodies in developing countries). It complements other risk analysis instruments, such as Strategic Environmental Assessment, and can prepare the ground for the development of comprehensive adaptation strategies. Climate Proofing for Development builds on the principles set out in OECD’s Policy Guidance “Integrating Climate Change Adaptation into Development Cooperation” (see Box 1)

Why Climate Proofing for Development?

Different planning horizons demand different responses

Even if greenhouse gas emissions (GHG) are drastically reduced in the near future, changes in climatic conditions will still occur and the scope of their impacts will markedly increase in the future. The construction of roads in areas which are increasingly flood-prone runs the risk of failing to take precautions against the likely consequences. The promotion of rice production in low-lying areas which might be

In 2009 the OECD published the Policy Guidance “Integrating Climate Change Adaptation into Development Co-operation”. The main principles of this guidance are taken into account in the Climate Proofing for Development approach:

(1) Identification of the appropriate level

The integration of climate change adaptation into planning may occur at different levels, namely:

- national,
- sectoral,
- local,
- project level.

(2) Identification of entry points

Integrating climate change adaptation at different levels implies the need to identify appropriate entry points along the project or policy cycle. These entry points enable climate-related action to be incorporated into planning even if this had not originally been envisaged.



(3) Applying a climate lens

The application of a climate lens requires investigation of the extent to which

- a measure might be affected by climate change impacts,
- these impacts are considered in the planning,
- adaptation is required to address climate challenges and opportunities.

flooded due to sea level rise may, for example, lead to financial losses. The longer the planning horizon, the more crucial it becomes to take account of climate issues in planning processes.

Figure 1 illustrates how far our planning decisions reach into the future. The annual choice of crops entails only a short planning horizon and can be easily and rapidly adapted to perceived changes in environmental conditions. For example, land-use choices made in spatial planning or the construction of large irrigation schemes need to build on a longer time perspective. Large-scale infrastructure such as roads, railways, dams and bridges are meant to last many decades. Thus the impacts of climate change already need to be taken into consideration in the planning phase in order to ensure the viability of measures in the future. Policy makers, project managers, donors or development planners are faced with the challenge of taking into account future climate changes in short, medium and long term planning decisions.

Climate change is already having an impact on development

Climate change is already taking place and calls for appropriate action. A long list of bio-physical and socio-economic impacts aggravates existing development problems such as water scarcity and more frequent and intense extreme weather events (floods, heat waves), leading to substantial biodiversity loss, migration, conflicts and health threats, to name a few. Both populations and production systems in many developing countries are highly dependent on natural resources and often have relatively limited adaptive capacity. As a result, many of these countries are the ones most seriously affected by climate change.

As policy makers and planners in many developing countries confirm, these trends already have a considerable influence on the objectives of development initiatives at various levels, including cross-sectoral policies, strategies, investment programmes and local municipal planning. According to an OECD analysis, between 12% and 50% of aid flows risk being affected by the effects of climate change (OECD 2005).

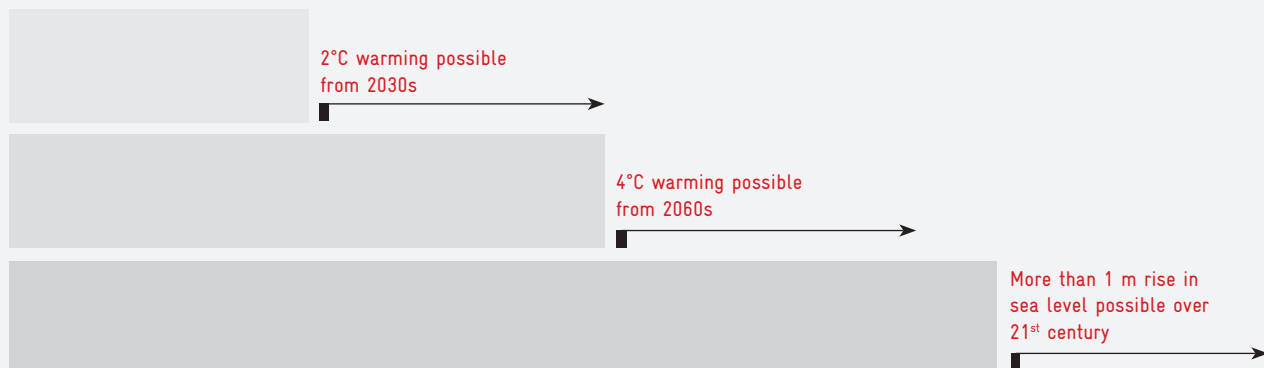
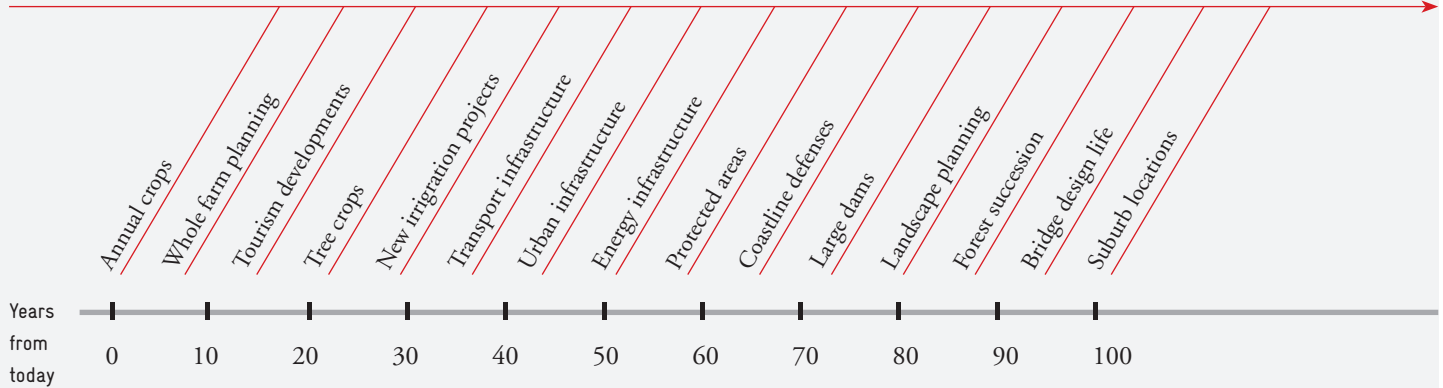
Partner countries' initiatives

Governments in many countries are already anticipating the impacts of climate change in certain sectors and areas. Government bodies from such diverse countries as India, Morocco and Mali have urged for climate change to be integrated into planning cycles. Multilateral development banks such as the Asian Development Bank and

Figure 1:
Planning horizons -
today's decisions shape the
future

Source: Stafford Smith et
al. (2010)

Balance of options for action changes from "autonomous and incremental" to "planned and transformative"



the World Bank have also stressed the need to consider climate change impacts and to strengthen the adaptive capacity of development initiatives (ADB 2005, Agrawala et al. 2010). This means that development planners, donors, national and sub-national authorities, decision makers and other stakeholders are called upon today to respond to current and future climate risks and opportunities which are already apparent in many places.

When can Climate Proofing for Development be used?

An analysis of ways in which development processes can take the challenges and opportunities of climate change into account will be most effective if it is carried out in the planning phase. In other words, it is most effective when strategies or policies are in the process of being formulated and before municipal plans and projects are implemented. However, such an analysis can also take place during the process of revising or even implementing plans.

Who is involved in Climate Proofing for Development?

Climate Proofing for Development has been developed for use by government institutions at various levels, many of which are partners in GTZ projects. However, the approach can also be used by other national or international organisations, NGOs, and even by the private sector. Depending on the individual planning context, it is usually the case that one or several groups of stakeholders (such as policy makers, project managers, change management experts or development planners) will introduce and provide back-up for the Climate Proofing for Development approach. Project staff, climate change experts and local people, including farmers, will all participate in different phases of the process.



PART A) PRINCIPLES AND ELEMENTS

Climate Proofing for Development is based on specific principles and methodological

steps and can be accompanied by Technical Assistance measures. All of these are described in this chapter.

1 Approach and principles

Climate Proofing for Development builds on three principles as illustrated in Figure 2.

Process is key

Climate Proofing for Development requires institutions and their staff to change familiar procedures and modes of planning. These changes require time and sensitive process facilitation. Climate Proofing for Development follows a stepwise approach which values and recognises the different interests, needs, and positions of the stakeholders involved. Strong leadership helps in implementing the envisaged changes, but Climate Proofing should not be imposed. For example, work on climate change issues in sectoral policies should build on the genuine interests of the sectors concerned regarding specific climate-related questions, rather than being imposed by environmental or cross-sector institutions. In addition, a sound communication strategy facilitates the development of shared solutions among the various stakeholders.

Form follows function

Climate Proofing for Development is flexible. The approach is adapted to each specific context, to socio-economic and political conditions, as well as to the existing institutional framework. Other on-site conditions that have to be taken into account are the available funds, prior experience with environmental tools, the extent of climate change awareness, and technical expertise. For instance, relevant decision

Principles

.....

■ PROCESS
IS THE KEY

■ FORM FOLLOWS
FUNCTION

■ MIX OF
PERSPECTIVES

Methodological steps

.....



Technical Assistance services (examples)

.....

Capacity development for climate
information and Climate Proofing
for Development approach

.....

Vulnerability and impact analysis

.....

Process facilitation

.....

Support for organisational devel-
opment (e. g. procedures, institu-
tions, human resources)

.....

Financial or technical support for
implementation

.....

makers and policy makers, development planners, climate change experts as well as representatives of the population affected by climate change should discuss the choice of options for action together. The use of Climate Proofing for Development for national strategies will entail different stakeholders, terminology and levels of abstraction than the work with communities on Climate Proofing for Development in land use planning.

Mix of perspectives

In order to make Climate Proofing for Development a success, different perspectives are needed to enrich the process. Climate Proofing requires technical know-how, methodological expertise, and experience in process management. Action should be taken cautiously, and stakeholders should always be involved in meaningful cooperation settings. Knowledge of conditions on the ground should be brought together with climate change science and policy making expertise.

2 Methodology

The Climate Proofing for Development approach contains four main steps. These are also illustrated in Figure 2 (page 11). The steps can be extended or adapted individually according to the “form follows function” principle. The principles described in the previous chapter are taken into account in all the steps.



Step 1: Preparation

In step 1, the ground is prepared for using Climate Proofing for Development in an efficient and highly beneficial way.

In order to facilitate more effective, climate resilient planning, climate information - especially on current and future climatic trends (e.g. sea level rise, reduced water availability, etc.) - has to be gathered and compiled in a user-friendly way. If no processed information is available, a desk study may be carried out to provide a data base. It has proven helpful to develop climate change factsheets to be used in the process and to identify three or four main trends.

Not all plans are affected by climate change. Based on the information gathered, climate change experts and planners, project managers and decision makers have to

**Box 2**

How to collect
and prepare
climate data

The GTZ manual “Climate Change Information for Effective Adaptation” provides an introduction into the generation and interpretation of climate change information. It includes practical instructions for dealing with the basic concepts of climate change science and its methods. It can be downloaded from the internet. www.gtz.de > Publications > Search and order

determine whether it is reasonable to engage in Climate Proofing for Development in a specific context. When doing so, they can use the questions listed in Table 1 as a guide.

Table 1:
Examples of key questions for the choice of local government plans to be subject to Climate Proofing for Development

Key questions	Examples
<input checked="" type="checkbox"/> Do climatic trends, such as increasing temperatures or sea level rise, potentially have an impact on planning? If so, specify.	Low impact Medium impact ...
<input checked="" type="checkbox"/> Is the time horizon of the planning relevant to these climatic trends?	Short-term planning horizon – high relevance Long-term planning horizon – medium relevance ...
<input checked="" type="checkbox"/> Does the planning refer to elements (exposure units) which are particularly affected by climate change (e.g. sectors, policy aspects, geographic area, specific target group, etc.)?	Agriculture Energy production policy Coastal zones Dry land regions Mountain regions Fishermen ...

The questions also help to identify those elements in the planning which are particularly affected by climate change. These so-called exposure units can include productive sectors (e.g. agriculture), policy aspects (e.g. energy production policy), geographic areas (e.g. coastal zones, dry lands or mountain regions) or a specific target group (e.g. farmers). The choice of the exposure units provides the basis for step 2.

From the “process is key” perspective, the integration of climate change issues into development planning needs an entry point along the policy or project cycle. In the ideal case such an entry point is at the beginning of a planning phase. In certain cases where planning documents are not yet available or the planning is to be revised, other entry points have to be found, for instance a mid-term evaluation. It is also necessary to identify the stakeholders to take part in the process.

The participating stakeholders can usually be divided into two groups: first, stakeholders who act as “catalysts” for the change process, such as policy makers, managers in institutions, consultants and experts, and project managers; and second, stakeholders who will apply and implement Climate Proofing for Development, such as development planners, climate change scientists, and project staff. These groups may overlap. External support may prove valuable for all the different stakeholders.

Step 2: Analysis

In step 2, stakeholders and experts conduct a clear-sighted analysis of the biophysical and socio-economic effects of climatic trends on each exposure unit and develop probable chains of effects for climate change. Biophysical effects relate to physical phenomena such as species migration in ecosystems. Following the chain of effect, the bio-physical effects lead to socio-economic effects such as reduced employment opportunities or loss of income. The chains of effect are compiled in tables. (See Figure 3, page 16)

Following this, the relevance of the effects for planning is assessed with regard to:

- the probability of the effects occurring,
- the impact of the effects on project objectives,
- the ability of institutions and groups to adapt to the changes without external support.

The most significant effects are identified on the basis of this evaluation. Steps 3 and 4 are carried out only for the most relevant effects. For instance, if the climate change effects identified entail only negligible risks for planning, these should be addressed at this stage. In many cases the project leader chooses five to seven main effects.

The assessment matrix shown in Figure 4 (page 17) illustrates a way of assessing the relevance of climate effects that has been adapted to communal planning in Viet Nam.



A	B	C	D	E	F
Climatic trend	Exposure Unit	Bio-physical effect	Socio-economic effect	Relevance for planning	Options for action
More frequented and intense heat waves	Road infrastructure	<p>Pavement quality decreases during the heatpeak</p> <p>Shorter life time of roads</p>	<p>Higher costs to maintain road infrastructure</p> <p>Limited access to markets</p>	<p>Direct link to planning objective (improved access to markets)</p> <p>Medium probability of occurrence</p> <p>Low adaptive capacity</p>	<p>Use adapted construction materials</p> <p>Maintain flexible construction schedule</p>
<p>Rising mean annual temperature</p> <p>More frequent long dry phases</p>	Forests	<p>Changes in environmental factors -> species migration, ecozone shifts</p> <p>More frequent and intense forest fires</p>	<p>Possible forest uses constrained (timber, non-timber forest products for consumption and trade)</p> <p>Employment potential in forestry sector decreases</p>	<p>Direct link to planning objective „Sustainable forest management“</p> <p>Medium probability of occurrence</p> <p>Medium adaptive capacity</p>	<p>Biomonitoring</p> <p>Fire hazard management</p>
...

Figure 3:
Summarising table for analysis (simplified example)

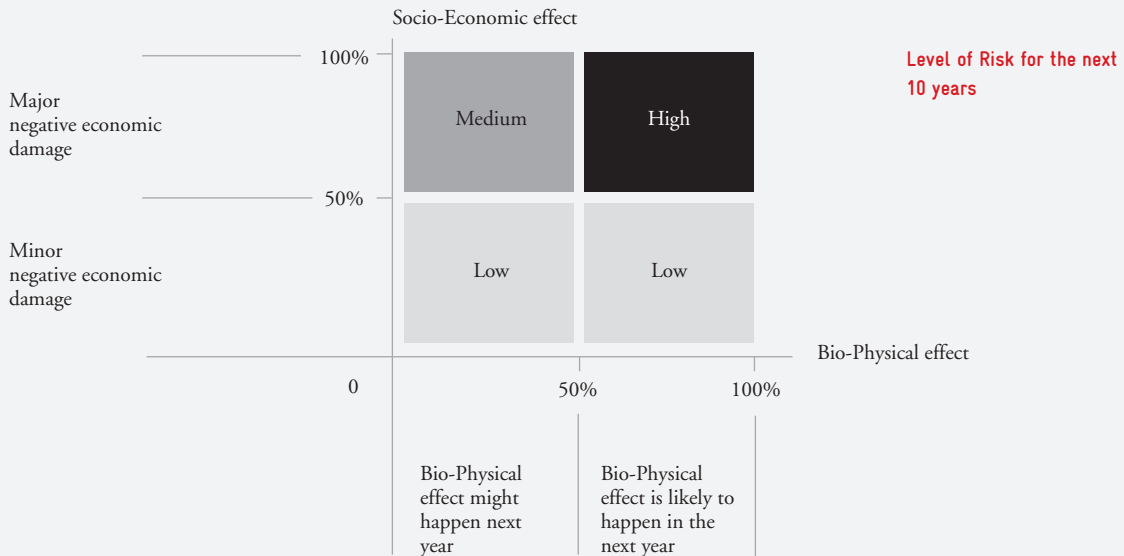


Figure 4:
Assessing relevance to planning in Climate Proofing for Development (example of Viet Nam)
Source: GTZ (2010)



Step 3: Options for action

For the most significant effects defined previously, options for action are developed to reduce the effects of climate change and to make use of the opportunities presented by climate change wherever possible. This step is supported by sectoral support sheets which compile experiences of adaptation to climate change in specific sectors. For the choice of options, the respective Climate Proofing for Development stakeholders take into account criteria such as the following (see Table 2).

Criteria	Description
Strategic relevance	<p>The option for action particularly concerns severely affected and vulnerable regions or fields of action.</p> <p>The option for action has a reliable and long-term, goal-oriented effect (i.e. risk reduction).</p> <p>The option for action prevents irreversible and dramatic damages.</p>
Urgency	<p>Climatic trends are already occurring or will occur in the near future.</p> <p>Decisions about long-term investments and development paths are taken.</p>
Side effect	<p>The option for action supports or is consistent with the objectives of other activities (sustainability, biodiversity, climate protection).</p> <p>The option for action engenders positive effects on different fields of action (win-win solutions, in particular concerning climate protection and sustainability).</p>
No regret	<p>Positive effects will be generated both without changed climatic conditions as well as within different climate scenarios.</p>
Flexibility	<p>The option for action can be modified or further developed.</p> <p>The option for action can be reversed once conditions change.</p>
Economic aspects	<p>The medium or long-term benefit of the option is greater compared to its costs (including non-monetary aspects).</p> <p>The use of resources is efficient.</p>
Political and social acceptance	<p>The moment for implementing the option for action is favourable (“window of opportunity”).</p>

Table 2:
Criteria to prioritise options for action
Source: Vetter, A.; Schausser, I. (2010)

Instruments such as cost-benefit analyses support the selection of options for action and are deployed according to the specific possibilities. Table 3 illustrates one technique which might facilitate this prioritisation. This table has been developed for the Climate Proofing for Development application in Viet Nam.

Criteria	Scores for selected options for action (OA) (1=very much; 5=not at all)		
	OA 1) (please specify)	OA2) (please specify)	OA 3) (please specify)
Do the benefits from this option for action promote climate change adaptation?			
Compared to the benefits, are the additional costs reasonable?			
Taking into account the costs and benefits, are the required funds available to implement this option? If not, what additional funding is available?			
Would the benefits of this option for action also occur in the long-term?			
Is the planning horizon for the option for action in line with the planning horizon for the climatic trends?			
Do the required technical skills to implement the option for action exist? If not, which skills have to be acquired?			
Total Score			
Rank			

Table 3:

Sample table for prioritisation of options for action





In certain cases options for action provide additional development benefits such as the creation of employment opportunities, the improvement of water availability, and the enhancement of environmental health conditions. These co-benefits are also taken into account.

At the end of this step the options for action to be integrated are selected by the stakeholders on the basis of these criteria. In many cases a limited number of options (e.g. often three per category below) are identified and categorised:

- Actions at the start of the project
- Actions to be planned for the implementation period
- Adjustments to the objectives, indicators or the Monitoring and Evaluation system

Step 4: Integration

This step aims to integrate the selected options for action into planning documents and the monitoring and evaluation processes. The amendments depend very much on the level at which they are implemented. Accordingly, the Climate Proofing for Development stakeholders define, adapt or redesign the respective planning, including planned policy or strategy formulations and/or national, sectoral, local or project development plans. The following key questions guide this integration:

- How can the option for action be integrated into the planning (e.g. by slightly modifying the activity)?
- Is it necessary to modify the original planning to integrate the option for action? If so, how?
- Which additional technical skills / funds are required to implement the option for action?

Some options for action to be integrated can be quite fundamental, such as choosing areas less prone to floods. In other cases, the integration will be about changing the way things are done or shifting priorities. The Climate Proofing for Development application does not end with the revision of planning. Adaptation to climate change is also subject to regular monitoring and evaluation procedures.

3 Technical assistance services

In order to apply Climate Proofing for Development in an effective manner, different kinds of knowledge are required at different stages of the step-by-step approach. Each application demands different know-how. For instance, at the beginning of applying Climate Proofing for Development, it is important that practitioners generate a degree of awareness about climate change and about ways of interpreting climate change information. At the end of the process, technical know-how might be of particular relevance in order to implement the adapted planning (see Figure 2, page 11).

It is crucial to identify the expertise needed at different points during the process in order to seek the right kind of technical assistance support from development experts if needed.

Box 3:

Climate Proofing for Development
in practice – Support services

Training “Integrating Climate Change Adaptation into Development Co-operation”

Based on the OECD Policy Guidance, GTZ has developed a training module aimed at enhancing capacity among development actors so that they are able to take action on climate change adaptation at national, sector, local and project level. The core modules work systematically from a vulnerability assessment through to concrete options for action. The practitioners’ course conveys the teaching content mainly through interactive case work, focused on the fictitious case State of Zanadu. A comprehensive package of training material is available for download at www.oecd.org/dac/environment/climatechange.





PART B) APPLICATION AT SPECIFIC LEVELS

Climate Proofing for Development can be used at different levels, namely at national, sectoral, local and project level. Each level features specific characteristics,

e.g. leads to different kinds of actions or involves different stakeholders. The characteristics described in this part are to some extent based on the description given in the OECD/DAC Policy Guidance Integrating Climate Change into Development Co-operation (OECD 2009). Two good-practice examples additionally illustrate the Climate Proofing for Development approach in detail at different levels.

1 National level

Applying Climate Proofing for Development at the scale of an entire country is a very efficient means of mainstreaming the issue of climate change adaptation in national agendas and budgetary decisions. It may address short, medium or long-term national strategies or plans. Within the national policy cycle, the phases of policy formulation and planning provide the most appropriate entry points for Climate Proofing for Development. The integration of options for action into long-term national visions usually requires policy dialogue at the central government level. These are highly desirable from a climate change perspective but are sometimes difficult to realise. Additionally, it is important to ensure adequate allocation of financial resources to the respective authorities at sectoral level. International donors can play a key role in terms of budgetary support and capacity building for climate change.

On behalf of the German Federal Ministry for Economic Cooperation and Development, GTZ uses Climate Proofing for Development in support of the government of the Kingdom of Morocco in integrating climate change issues into the new phase of the National Development Initiative. The objective of this support is to ensure that the National Development Initiative takes systematic account of the challenges and opportunities of climate change.

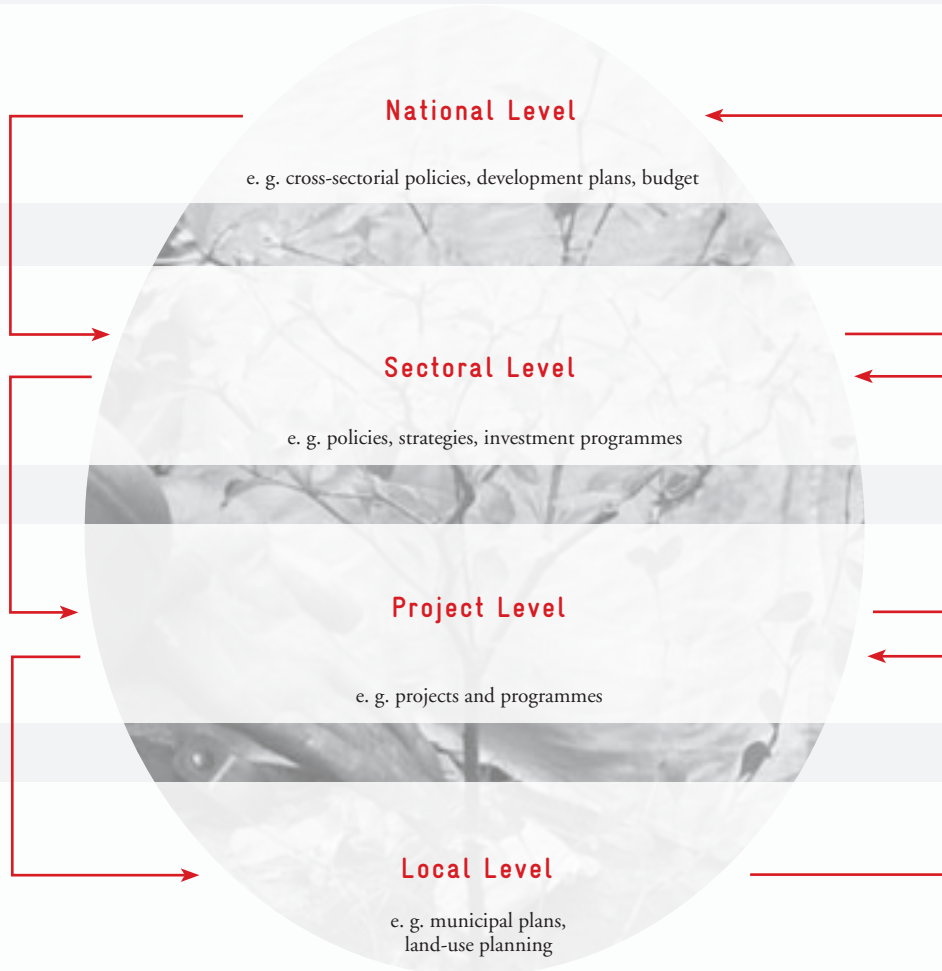


Figure 5: Levels of application for Climate Proofing for Development

2 Sectoral level

At the sectoral level, Climate Proofing for Development can be especially important in planning sectoral policies or planning physical investments, for example. In this case the planning horizon of such investments is of particular relevance. Climate Proofing for Development can also be integrated into Strategic Environmental Assessments (as described in the GTZ example of Mali below).

The ideal entry point is during the sectoral policy formulation or sectoral planning stages. Priority is usually given to development initiatives which are costly to modify later on. Climate Proofing for Development can also be used to generate an overview of the sectoral impacts of climate change. Donors can play an important role regarding sector-level budget support and sector-wide approaches, as well as in providing training for key actors on climate change adaptation.

3 Local level

Integrating climate change into planning at the local level is particularly important for three reasons:

- Climate change affects local livelihoods and environment.
- Climate vulnerability and adaptation are determined locally.
- Options for action are often best identified at the local level.

Implementing options for action at this level often makes local people the main actors in the implementation process when, for instance, it is a matter of adapting agricultural production or improving their own housing. Donors can play an important role in providing training for municipal government staff and raising awareness about the opportunities and challenges of climate change among the local population. GTZ has had experience in adapting the method to community-level use in Mali and Viet Nam.

4 Project level

Climate Proofing for Development is a powerful and important tool at the project level as (1) project goals may be directly affected by the effects of climate change and (2) project results may increase or decrease the climate vulnerability of bio-physi-

cal and socio-economic systems. Climate Proofing for Development can be applied during project identification and during the project design phase. Donors can either climate proof projects they are involved in or provide the required support when projects or programmes of other actors are to be climate proofed.

For instance, as a result of applying Climate Proofing for Development in a flood control project in the Philippines, participants concluded that certain settlements risk increasing their exposure to floods. Currently, options for action are being compared and analysed, such as the introduction of an integrated river management approach or floating houses. Climate proofing has also been applied to the forest sector, fisheries, and agriculture programmes. At present, the methodology is being rolled out through an approach involving the training of trainers.

Case study:
Climate change
adaptation
at various levels
in Mali

Mali

Background

The economy of Mali is essentially based on the use of natural resources. Demographic growth and climatic constraints are increasing the pressure on livelihoods among Mali's population. The government of Mali decided to take account of climate change issues at various levels of development planning. On behalf of the the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and the German Federal Ministry for Economic Cooperation and Development (BMZ), GTZ supports Mali in the integration of climate change issues into planning at the project, national and sectoral as well as at local levels. Activities at the various levels are closely interlinked.

The Malian stakeholders of Sustainable Land Management (SLM) have invested a considerable amount of resources in the careful selection of a tool for taking account of climate change in development processes. They have opted for Climate Proofing for Development because of its participatory and flexible process-based approach and, above all, because it enables stakeholders to be included who are not computer-literate.

Figure 6:
Climate Proofing
for Development
in Mali



... at project level

Following a series of training sessions on the Climate Proofing for Development approach involving Malian stakeholders, two projects from the Sectoral Investment Framework “Sustainable Land Management” have been climate proofed on a pilot basis. One SLM project in the Kayes Province, for example, is financed by various donors and seeks to encourage the local population to protect natural resources in order to halt advancing desertification. Applying Climate Proofing for Development made it possible to identify several options for action aimed at allowing a more efficient use of resources while taking into account current and future climate change impacts. These options include the diversification of agriculture through intercropping and the use of adapted varieties, as well as the promotion of efficient water use by collecting and storing rainwater. Following these field experiences, the SLM and GTZ team developed a Climate Proofing for Development manual which is adapted to the Malian context (Konate, Fröde 2009). A pool of experts has been formed and trained, and Climate Proofing for Development is being included in the planning cycles for all SLM projects.

Mali

... at national and sectoral level

As Climate Proofing for Development was shown to be highly successful for SLM projects, the Malian government also recommended its use at the national and sectoral levels as part of Strategic Environmental Assessments (SEAs) for all major policy processes and interventions. Subsequently, along with the “form follows function” principle, Climate Proofing for Development was adapted for integration into SEAs. A pilot application incorporating an in-depth technical and methodological evaluation was carried out for the National Programme on Small-Scale Irrigation. Lessons learnt from this prototype are meant to be used for the development of the Malian standard methodology for Strategic Environmental Assessments.

... at local level

In order to adapt municipal planning to the impacts of climate change, a pilot project using the Climate Proofing for Development approach is being carried out in four municipalities. This involves addressing climate impacts from the very beginning of the planning process, including capacity development for all relevant stakeholders. One of the outputs of this pilot project will be a manual for applying Climate Proofing for Development to municipal development planning processes in Mali.

Results achieved and outlook

The Climate Proofing for Development approach has proven its flexibility as the methodology is adapted to the logic, terminology and stages of Malian planning processes. The processes of adapting the climate proofing approach which have been supported by GTZ have reflected the “process is key” principle and have been characterized by a high level of ownership, which is reflected by the Malian partners in several ways: (1) On its own initiative, the Malian Ministry of Environment has developed a dissemination strategy for the Climate Proofing for Development approach. (2) A working group has been set up by the Ministry whose task will be to improve the process of applying Climate Proofing for Development, particularly regarding quality control and the dissemination of experiences. (3) Additionally, other Ministries and non-governmental organisations (NGOs) are also showing interest in applying Climate Proofing for Development and in mainstreaming climate aspects. The process-based approach of Climate Proofing for Development, with its focus on dialogue between the respective stakeholders, was especially appreciated by the users.

Case study:
Climate proofed
communal planning
in Viet Nam

Viet Nam

Background

According to the IPCC's Fourth Assessment Report, the Mekong Delta, located in southern Viet Nam, is one of the world's regions that is particularly vulnerable to climate change. This area will be among the first and most severely affected by rising sea levels and by the increasing number of extreme weather events, including flooding after heavy rains. The expected consequences of global climate change will endanger efforts to alleviate poverty.

In order to take into account the impact of climate change in local planning, GTZ was assigned by the German Federal Ministry for Economic Cooperation and Development to initiate a pilot measure in the Tra Vinh Province located in the Mekong Delta. The aim of this measure was to increase adaptive capacity in the province by integrating climate change issues into community development planning.

Approach of applying the climate lens

In a first step, a small group of development planners and GTZ experts used the "form follows function" principle and adapted the Climate Proofing

for Development approach to southern Vietnamese circumstances. Given that the local planners of the market-oriented socio-economic development plans in Tra Vinh province (the main user of the approach) have more practical knowledge than theoretical know-how regarding climate change, the approach needed to be clear-cut, and it was necessary to explain the application of Climate Proofing for Development in a step-by-step manner. The GTZ team therefore elaborated a locally adapted manual based on the logic of Climate Proofing for Development (GTZ 2010). This manual includes three steps and twelve practical tasks, as illustrated in Figure 7.

Results achieved and outlook

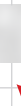
The Climate Proofing for Development approach was first applied as a pilot in five communes. As a result, selected options for action have now been implemented, such as adapted cultivation technologies. Once such adapted technologies are fully

implemented, the farmers will plant more drought-resistant seeds in order to safeguard or even increase the yield. This contributes to the generation of higher incomes.

Furthermore, a group of Vietnamese development planners in Tra Vinh Province has been trained to independently climate proof the communal plans with regard to climatic trends. Resource persons from governmental departments and a research institute located in the Mekong Delta have the capacity to conduct climate proofing training sessions. Generally speaking, people's awareness of climate change has been raised in Tra Vinh. Climate change issues now play a prominent role in the policy dialogue. The Vietnamese partners intend to use Climate Proofing for Development as an integrated component of socio-economic development planning for the whole province.

Identify

- 1 Exposure unit (e.g. value chain of a specific crop)
- 2 Climatic trends
- 3 Bio-physical impact
- 4 Socio-economic impact
- 5 Relevance for planning
- 6 Adaptive capacity
- 7 Options for action



- 8 Screening of options for action
- 7 Priorisation of options for action



- 10 Development recommendations for integrating options for action
- 11 Elaborate an action plan
- 12 Implement and monitor the action plan



Figure 7:
Adaptation of Climate Proofing for Development to the Vietnamese context
Source: GTZ (2010)

PART C) LESSONS LEARNT

GTZ is using
Climate Proofing
for Development

in more than 10 countries. These different contexts of application enable certain lessons to be drawn.

1 Feedback on Climate Proofing for Development

Feedback on the methodology often refers to the following three points:

Climate proofing for Development

— Is an integrative, participatory and flexible approach

Climate Proofing for Development is a participatory approach which draws strength from the mix of perspectives deployed. It provides an opportunity to engage a wide range of different stakeholders, from high-level decision makers to local populations such as farmers, in discussions about climate change. Even though the issue of climate change is not easy to deal with, the methodology is easy to understand and, following the “form follows function” principle, can be adapted to any context.

— Does not need computers or computer skills

The key steps of Climate Proofing for Development can be performed successfully without applying information technology. This means that it is possible to include actors without computer skills. It can therefore be used globally, even by local actors. However, more sophisticated techniques can be integrated as well: for instance, modelling can be included in step 1.

— Enables strong ownership

Reflection on past experiences has shown that Climate Proofing for Development achieves a high level of ownership by partners, as they realise how crucial climate

change adaptation is for their future. The approach enables an open dialogue to take place between the key stakeholders at different levels: the population exposed to climate change, decision makers, development planners and climate change experts. Thus it motivates people to take action.

2 Success factors and recommendations

Create a common understanding

Climate Proofing for Development increases the efficiency and effectiveness as well as the sustainability of development planning by strengthening its robustness to climate change. It is crucial that all those involved in the process share an interest in acting to address climate change and have a common understanding of this overall goal.

Sometimes this common understanding is challenged in practice by the use of climate change terminology, which is sometimes difficult to understand, especially when terms are translated from one language into another. Terms such as “exposure unit” or “socio-economic effect” can be formulated differently according to the stakeholders involved. It can be very helpful to paraphrase the key words or even to develop a glossary in collaboration with the key team.

Identify the stakeholders

Users have found that one of the factors for success lies in government institutions and development partners carefully identifying the participating groups. Due to their important role in “leading” the development initiative to be climate proofed,



decision makers and policy makers at the respective level of application should be involved in order to mainstream the approach in the planning process and to ensure political support.

The “mix of perspectives” should include a broad spectrum of know-how such as climate change, organisational and management expertise, knowledge of the planning and the project context, knowledge of the local, regional or national environment, as well as communication skills.

Involve the stakeholders at the right moment

It is not necessary for all the participants who have been identified to take part in each step. Along with the “process is key” principle of Climate Proofing for Development, for instance, scientific actors may play a more important role when it comes to collecting and working up climate information in steps 1 and 2; they become less crucial players in steps 3 and 4, although they should also participate at this stage as well. Policy makers and project managers are particularly important in each planning context, as they are the ones who can support the application of Climate Proofing for Development in the medium and long term.

Handle climate change information appropriately

Climate Proofing for Development requires climate change information such as climate data bases, impact or vulnerability assessments, local knowledge about climate change, and so on. This information has to be either collected or generated. Usually, scientifically based climate data have to be translated into “take home messages” that can be understood by a broad range of stakeholders in the process. When reducing the complexity of climate information data (such as those concerning causes and effects), it must be ensured that it is not oversimplified, as this might reduce the degree of acceptance and the overall effectiveness of the approach.

Find a good entry point

Climate Proofing for Development should not be applied at any randomly chosen moment. Users confirm that plans already subject to implementation are difficult to adapt to include climate issues at very short notice. Ideally, climate proofing will take place during the initial drafting and planning of measures or during the re-orientation and updating of the planning phase.

☑ Allocate adequate time and funding

A few days may be sufficient to successfully apply Climate Proofing for Development in a single (pilot) case, but not to implement an adapted version of Climate Proofing for Development in a given context. In order to allocate adequate time and funding, a distinction needs to be made between (1) conceptualising the process, (2) applying the four-step approach, and (3) evaluating the application, including ongoing quality control (monitoring and evaluation).

The time and funding needed for these tasks have to be estimated for each context of application. The preparatory phase and evaluation are of particular importance in order to mainstream the Climate Proofing for Development approach into local policy or project structures.

☑ Integrate the approach into monitoring and evaluation procedures

Climate Proofing for Development is not a one-off activity and should be integrated into all planning, implementation and evaluation processes. Accordingly, users stress the importance of ensuring that planning adapted to climate change is part of existing quality control procedures, including monitoring and evaluation mechanisms.



References¹

ADB (2005): Pacific Studies Series, Climate Proofing, A Risk-based Approach to Adaptation: ADB, Manila.

ADB (2009): The economics of Climate Change in Southeast Asia, A Regional Review: ADB, Philippines.

Agrawala S., A. M. Kramer,

G. Prudent-Richard and M. Sainsbury (2010): Incorporating climate change impacts and adaptation in Environmental Impact Assessments: Opportunities and Challenges: OECD, Paris.

GTZ (2009): Climate Change Information for Effective Adaptation, A Practitioner's Manual: GTZ, Eschborn.

GTZ (2007): Adapting to Climate Change: GTZ, Eschborn.

GTZ (2010): Climate Proofing Tool for Tra Vinh – Manual: GTZ, Viet Nam

IPCC (2007): Climate Change 2007, Impacts, Adaption and Vulnerability. Report of the Working Group II of the Intergovernmental Panel on Climate Change (IPCC), edited by Nicholls, R.J., P.P. Wong, V.R. Burkett, J.O. Codignotto, J.E. Hay, R.F. McLean, S. Ragoonaden and C.D. Woodroffe: Cambridge University Press, Cambridge.

ISPONRE (2009): Viet Nam Assessment Report on climate change (VARCC): ISPONRE (Institute of Strategy and Policy on Natural Resources and Environment), Viet Nam.

Konaté, S. / Fröde, A. (2009): Manuel d'utilisation du Climate Proofing dans les projets et programmes de Gestion Durable des Terres au Mali: Secrétariat Technique

¹ Literature cited in the text and main sources used in the development of the methodology.

Permanent du Cadre Institutionnel de la Gestion des Questions Environnementales, Bamako.

OECD (2005): Bridge over troubled waters, Linking climate change and development: OECD p, Paris.

OECD (2009): Integrating Climate Change Adaptation into Development Co-operation, Policy Guidance: OECD, Paris.

Stafford Smith, D.M., Horrocks, L., Harvey, A., and Hamilton, C. (2010): Rethinking Adaptation for a Four Degree World: Phil.Trans. Roy.Soc. (in press).

UNDP (2008): UNDP Climate Change Country Profiles: UNDP, Bamako.

USAID (United States Agency for International Development) (2007): Adapting to climate Variability and Change, A Guidance Manual for Development Planning: USAID, Washington.

Vetter, A.; Schauser, I. (2010): Konzept zur Priorisierung von Handlungserfordernissen und Maßnahmen zur Anpassung an den Klimawandel: Umweltbundesamt, Dessau-Roßlau. Unpublished manuscript.

World Bank (2004): Look before you leap, A Risk Management Approach for Incorporating Climate Change Adaptation in World Bank Operations: Washington DC.

Acronyms

ADB Asian Development Bank

BMU German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

BMZ German Federal Ministry for Economic Cooperation and Development

GHG Greenhouse gases

GTZ Deutsche Gesellschaft für Technische Zusammenarbeit (German Technical Cooperation)

IPCC Intergovernmental Panel on Climate Change

KfW Kreditanstalt für Wiederaufbau

NGO Non-Governmental Organisation

ODA Official Development Assistance

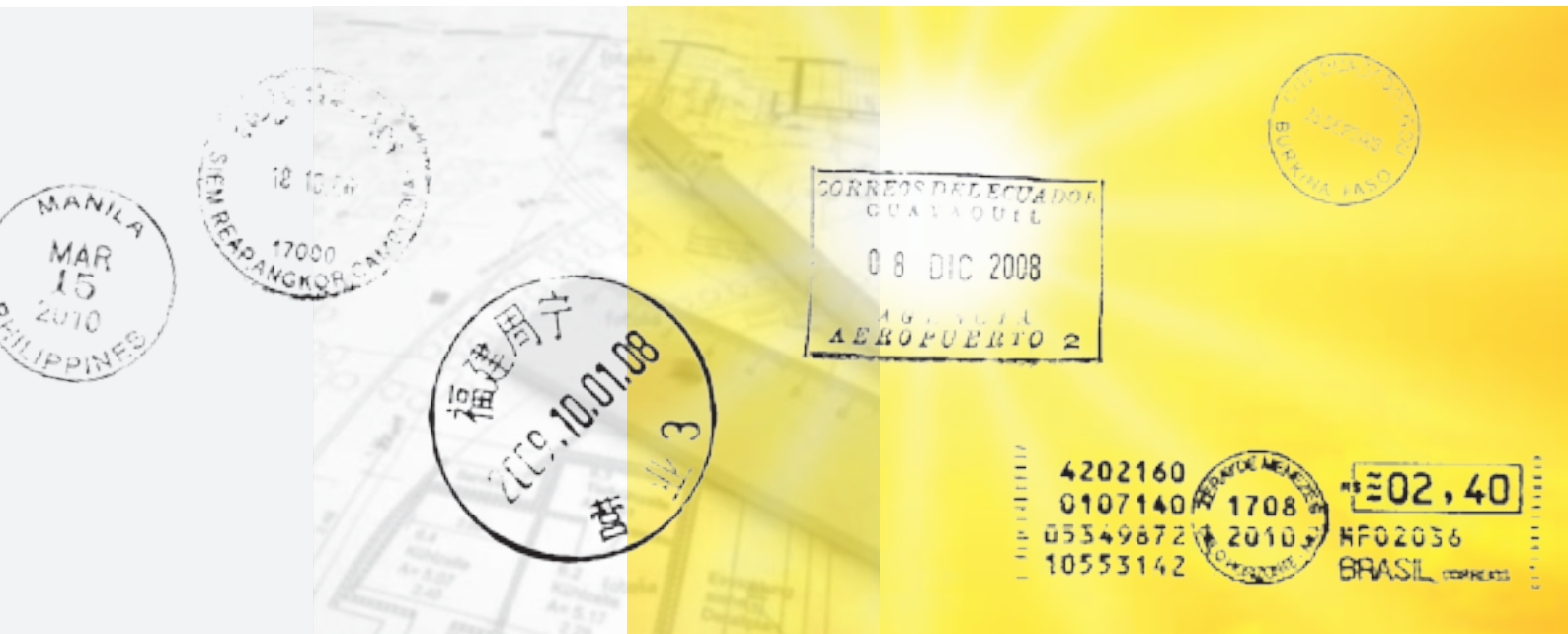
OECD Organisation for Economic Co-operation and Development

SADC Southern African Development Community

SEDP Socio-Economic Development Plan

SLM Sustainable Land Management

UNFCCC United Nations Framework Convention on Climate Change



Deutsche Gesellschaft für
Technische Zusammenarbeit (GTZ) GmbH
- German Technical Cooperation -
Climate Protection Programme

Dag-Hammarskjöld-Weg 1-5
65760 Eschborn/Germany
T +49 61 96 79-0
F +49 61 96 79-11 15
E info@gtz.de
I www.gtz.de