Specific User Guide

Environment and Climate Safeguards

Not ENVIRONMENT CLIMATE ner

As at: 12 May 2017

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I The basics at a glance

General	
Objectives	• To make all the results of GIZ projects and programmes as sustainable as possible – Systematic consideration of **environmental and climate risks** to protect humans and environmental assets in the project context and the projects and their results themselves (especially in connection with adaptation to climate change) – **Reduction of greenhouse gases**, enhanced **adaptive capacity** – Additionally for BMZ: Use of **potentials** for improving environmental quality, reducing greenhouse gases, enhancing adaptive capacity
Binding nature	• Since December 2016 **binding** for all projects and programmes irrespective of the commissioning party • For **InS**: If commissioning parties specify the compulsory application of comparable safeguards using comparable criteria, the requirements of Safeguards+Gender are considered to be met. • There are some **defined exceptions** which are set out in the General User Guide Safeguards+Gender Management System.
Costs	• Usually financed from the funds available for planning and implementing the measure. For German public sector clients (except BMUB IKI), a decision should be agreed on a case-by-case basis (further clarification follows).
Support and further information	• Public DMS working group on the environmental and climate assessment, for further information, sectoral user guides and examples
Screening	
Application	• Standard in **O+R** and therefore mandatory
Timing	• Before despatch of the brief assessment or before the commission clarification meeting; in the case of BMUB IKI offers, after being instructed to prepare an offer
Responsibility	• **Officer responsible for the commission** (AV-V or project manager)
To be performed by	• AV-V or delegation to Sectoral Department or external persons
Workload	• 20 minutes to one hour
Format	• **Checklist**. For BMUM IKI also transfer into Annex 4 (see 6.4)
To be submitted to	• **Safeguards+Gender Desk** (quality check for plausibility) safeguardsandgender@giz.de • Additionally for BMZ: To BMZ's regional division the sections of the checklist that relate to environment and climate (annex to brief assessment or before commission clarification meeting)

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Decision-making	• The S+G **Desk** assesses the **plausibility** of the submitted checklist in the light of the requirements of the S+G management system and comments on any queries or need for adjustment. In the event of any further need for harmonisation, the **AV-V and Desk together** clarify which solution is appropriate.
Outcome	• Decision on **whether an in-depth assessment** needs to be performed; the screening is documented as a completed checklist with reasons and uploaded to the PBS.
Tools/support	• Planning officers in the Sectoral Department • Sectoral user guides with examples of risks and potentials • Annex 3: with background information on the environmental and climate assessment, sources for research and risk categorisation • For procedural questions: Safeguards+Gender Desk (safeguardsandgender@giz.de)
In-depth assessment	
Importance	• The in-depth assessment enables identified risks and potentials to be analysed in more detail and taken into account in the **project design**/cycle. This helps projects and programmes to be designed to be as **sustainable** as possible in **all their results**.
Application	• Mandatory and appropriate if the screening has identified considerable environmental and/or climate **relevance** (risks and in BMZ business also additional potentials).
Timing	• During the appraisal mission or similar / before completion of the offer
Responsibility	• Officer responsible for the commission (AV-V or project manager)
To be performed by	• Usually members of the appraisal mission (planning officers, consultants)
Workload	• Usually 3 expert-days within a mission, depending on the complexity of the project and the number of individual in-depth assessments (risks/potentials: environment, climate change mitigation, adaptation to climate change)
To be submitted to	• Safeguards+Gender Desk (quality check for plausibility) safeguardsandgender@giz.de • For **BMZ** also to: the regional division (annex to offer) • **BMUB** offers for International Climate Initiative: Annex 4 of the IKI project proposal, but the Safeguards+Gender checklist is not sent to BMUB • For **GCF** projects also to GCF
Decision-making	• The S+G Desk assesses the **plausibility** of the submitted checklist and comments on any queries or need for adaptation. In the event of any further need for harmonisation, the **AV-V and Desk together** clarify which solution is appropriate.
Outcome	Inclusion of environmental and climate aspects in **project design** as necessary; documentation of outcomes in the annex to the environmental and climate assessment or in adapted format including risk rating
Tools/support	• Planning officers in the Sectoral Department • Sectoral user guides with examples of risks and potentials • Link list in Annex 3

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- For procedural questions: Safeguards+Gender Desk (safeguardsandgender@giz.de)

2 The Safeguards+Gender Management System

The purpose of the Safeguards+Gender Management System is to help our projects and programmes to be designed to be as sustainable as possible in all their impacts. This also involves protecting projects (in connection with adaptation to climate change), target groups and protected assets against risks and unintended negative impacts. These are identified before placement of the commission and monitored throughout the project cycle.

The Safeguards+Gender Management System applies to projects and programmes of all commissioning parties. Upon publication in O+R in December 2016, Safeguards+Gender became mandatory for all new and follow-on projects.

The Safeguards+Gender Desk is responsible for providing advice and performing quality checks in connection with the Safeguards+Gender Management System.

To identify possible risks, perform a risk assessment and determine preventive measures, a two-stage assessment is required (**screening** and in the event of considerable risks or potentials (BMZ), the **in-depth assessment**).

Not to be circulated further

3 Introduction to the Environment and Climate Safeguards

There is an **environmental** safeguard because the quality, availability and social and economic services of natural resources form the basis for sustainable development.

Other development objectives such as food security, access to clean water and health cannot be achieved without an intact environment.

There is a **climate** safeguard because the effects of climate change restrict development potential or even reverse progress that has already been made. Because of the acute risks of climate change, the climate risk assessment consists of the climate change mitigation safeguard and the adaptation to climate change safeguard.

Facilitating development despite climate change requires ambitious emissions reductions and adaptation to climate change.

The assessment for the environment and climate safeguards therefore consists of three parts (environment, climate change mitigation and adaptation to climate change), and with reference to the existing system in BMZ business it is also called the environmental and climate assessment (ECA).

The aim of the safeguards in the areas of the environment and climate is to ensure that environmental and climate aspects are systematically considered in the planning and implementation of GIZ's development measures. In concrete terms this means ensuring that:

- unintended negative impacts on the **environment** and **climate** are reduced or avoided;
- there are no considerable additional emissions of environmentally damaging gases (greenhouse gases: CO_2, methane, nitrous oxide N_2O, etc.) by comparison with the status quo. CO_2 is produced mainly as a result of the combustion of fuels (oil, coal, gas, wood) and in industrial production; methane is produced in industrial production processes, in agriculture and in the course of waste disposal; and nitrous oxide is produced in agriculture. This is not primarily a matter of the project's emissions in the narrower sense, e.g. through the use of more efficient project vehicles – this is addressed by corporate environmental management at GIZ. Emissions can arise either through direct measures or indirectly through policy consulting on emissions-related issues. The status quo is the level of emissions at the time the project begins.

- The aim is take the impacts of climate change and climate variability into account and boost adaptive capacity. The aim of the **assessment of adaptation** to climate change is to investigate whether the intended development outcomes of a measure depend to a considerable extent on climatic parameters or on climate- and weather-related events such as drought and floods, and whether the project impacts adversely on the adaptive capacity – i.e. the ability to adapt to climate change and to enable development progress despite climate change – of target groups or ecosystems. If this is the case, measures must be identified that boost adaptation to climate change and/or the adaptive capacity of humans and ecosystems. A further aim is to actively exploit any positive impacts of climate change (such as utilising longer agriculture vegetation periods in temperate or cold zones).

In **BMZ business** the requirements for the environmental and climate assessment are set out in Guideline no. HR014, Guideline for the Assessment and Consideration of Environmental and Climate Elements in Bilateral Governmental Development Cooperation, which was updated in December 2014. The guideline specifies that in **BMZ business** it is mandatory not only to identify **possible risks/negative impacts** but also to identify and tap **additional potentials**. This refers to potentials that have not yet been taken into account in the conceptual design of the project.

The environmental and climate assessment is conducted in stages. If the screening finds considerable environmental and/or climate relevance or no conclusive decision can be taken on this, an in-depth assessment must be performed. The procedure is illustrated in Figure 1.

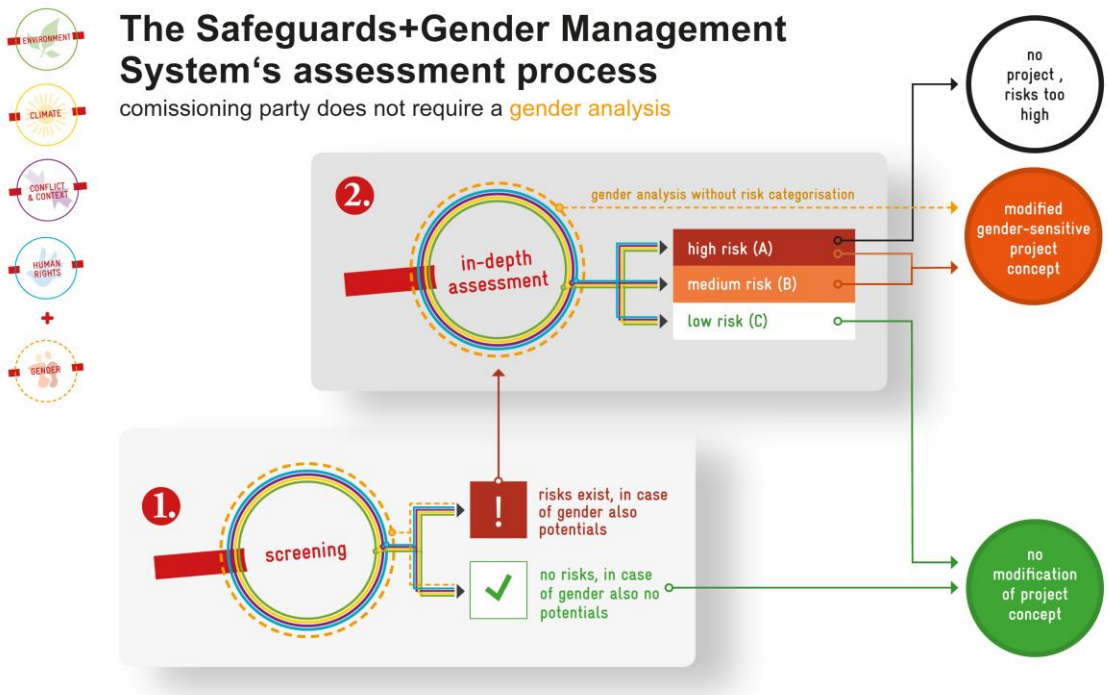

Figure 1: Overview of the two-stage procedure (all Safeguards + Gender).

4 Part 1: Screening

4.1 General procedure

The first step involves checking whether the project in question falls within the scope of the Safeguards+Gender Management System. The exceptions are set out in the General User Guide Safeguards+Gender Management System.

The screening of the environment and climate safeguard is performed using a checklist. Questions are answered on the basis of existing knowledge and easily accessible information. This enables a decision to be taken on whether an **in-depth assessment is needed.** This depends on whether the project may involve '**considerable risks**' for the environment, the climate or the climate resilience of target groups. In BMZ business an in-depth assessment is also needed to identify whether there are considerable potentials.

The evaluation benchmark used in the screening is how considerable the risks and potentials are.

What does 'considerable' mean in the context of the ECA?

In its ECA guideline, BMZ explicitly refrains from defining particular limit values or specifying certain sectors or areas of development assistance (e.g. in positive or negative lists). For all commissioning parties, whether risks are considerable is assessed against the following criteria, as appropriate:

- The **extent** of the (possible) impacts/adverse effects (e.g. the number of people affected, the size of areas/ecosystems affected)
- The **intensity** of the (possible) impacts/adverse effects (e.g. withdrawal/major impairment of access to water sources, significant increase in CO_2 emissions)
- The **frequency/**recurrence and **duration** of the (possible) impacts/adverse effects
- The **sensitivity/vulnerability** of the affected people, groups and areas, taking their adaptive capacity (resilience) into account if appropriate
- The **irreversibility** of changes
- National **legal and policy requirements** (environmental legislation, climate change mitigation targets, INDCs, etc.)

Not to be circulated further

Whether a risk is considerable may also arise from aspects not specified in the checklists. The checklists therefore do not exclude more extensive analysis. Additional guidance on interpretation of the criteria can be found in the sectoral user guides (Annex 1) and the detailed description of the criteria in Annex 2. **Responsibility** for assessing whether environmental/climate potentials are considerable lies with the officer responsible for the commission.

The S+G Desk assesses the plausibility of the submitted checklist and comments on any queries or need for adaptation. In the event of any further need for harmonisation, the AV-V and Desk together clarify which solution is appropriate. However, the Desk has a **right of veto** in the decision on whether in-depth assessments are to be performed.

If one or more questions in the screening are answered with 'yes', an **in-depth assessment** must be carried out for that safeguard. For BMZ projects an in-depth assessment is also performed if one of the questions on potentials is answered with 'yes'; for all other commissioning parties it is only performed if considerable risks are identified in the checklist. The in-depth assessment can be limited to the sub-areas or protected assets that are potentially affected.

The reason why an in-depth assessment is or is not to be performed must be transparently explained. Please give **details of the sources** on which your reasons are based.

In keeping with the **precautionary principle**, an in-depth assessment should also be carried out if there are uncertainties or a lack of information that mean that a clear decision on whether a risk is considerable is not possible.

Filing in the project processing system

The screening checklist should be sent to the Safeguards+Gender Desk for a plausibility check. After feedback from the Desk and revision if necessary, it is saved in the project file. The outcome of the screening is also recorded in the **Project Processing System** (PBS) under

offer/offer details for new projects and follow-on phases by entering Yes or No to indicate whether an in-depth assessment in relation to the environment, adaptation to climate change or climate change mitigation is needed. In future an automated function will be set up for filling in the checklist in the PBS: this will ensure that the Safeguards+Gender Desk is automatically notified when the checklist has been filled in.

Environmental and climate markers

The environmental and climate safeguards are independent of the assignment of markers: the markers are for statistical purposes and relate to the targets defined for the projects, while the in-depth assessments assist project design in the areas of environment and climate. However, if the project design is changed at the level of project objectives (main or subsidiary objectives) as a result of the in-depth assessment, the environmental and climate assessments may lead to the markers being changed.

4.2 Special features of BMZ business

Notwithstanding the exceptions in the annex to the General User Guide Safeguards+Gender Management System, the following criteria, which are based on the 'Guideline for the assessment and consideration of environmental and climate aspects in bilateral official development cooperation', apply to BMZ business:

- The ECA must be performed for **all BMZ projects: there is no value threshold**
- **Sector projects:** According to the BMZ Guideline, sector projects do not require a separate in-depth environmental and climate assessment. The ECA should be applied, when appropriate, to sector projects and the offer should explain how environmental and climate aspects have been taken into account.
- For projects in which climate change mitigation or adaptation to climate change is a primary objective (projects with the markers KLM-2 or KLA-2) the relevant in-depth partial assessment is not necessary, because it can be assumed that all considerable potential for mitigation or adaption has already been included in the conceptual considerations accompanying planning of the project.
- Projects with the marker **UR-2** (environmental protection and resource conservation as the primary objective) may have risks and potential in relation to protected assets that are not a core part of the measure. For projects with the UR-2 marker an in-depth environmental assessment must therefore not be ruled out: each case must be assessed individually and reasons given for whether an in-depth environmental assessment is necessary or not.

In all cases, i.e. including sector projects, the **screening checklist** must be completed and the decision for or against an in-depth assessment must be clearly stated and communicated to BMZ. The AV-V sends the Safeguards+Gender Desk the screening checklist for sector projects involving country measures to the value of one million euros or more.

Not to be circulated further

5 Part II: In-depth assessment:

5.1 General procedure

Preparation for the in-depth assessment should take place before the appraisal mission or design of the offer. Relevant information should be gathered with support from the relevant country office or programme as appropriate. This should include, for example, the results of other environmental and climate assessments in the country. Other useful sources of information are the sectoral user guides and annotated link lists (see Annexes 1 and 3).

Responsibility for the in-depth assessment lies with the officer responsible for preparation of the commission (AV-V). The AV-V may, however, assign the precise **arrangements** to consultants or members of the appraisal mission; they should, though, be discussed in detail with the officer. This consultation includes clarification of how stakeholders (project staff, partner institutions, further stakeholders, etc.) are to be involved and what approach is to be taken (consultation with national experts, organisation of workshops etc.). Stipulations made in the appraisal mission's ToR must be taken into account. The in-depth assessments should be performed and documented using the guiding questions set out in 5.2. The annex to the in-depth assessments that needs to be completed can if appropriate be a summary of more comprehensive analyses.

! Important !

The in-depth environmental and climate assessment must also be sent to the Safeguards+Gender Desk for a plausibility check.

The **three steps** of the in-depth assessment are set out below.

Not to be circulated further

5.1.1 Step 1: Analysis

The analysis differs for the three areas of the environment, climate change mitigation and adaptation to climate change. One element, however, is common to all analyses: each begins by **gathering and evaluating relevant environmental and climate information**. In particular, the relevant passages in the programme proposal part A, selected environmental or climate action plans of the partner country, country-specific climate fact sheets and submitted Nationally Determined Contributions (NDCs), sector analyses, studies etc. should be examined with regard to environmental and climate aspects (see link list in Annex 2). This research can enable likely developments in relation to the country's climate and environmental goods relevant to the project to be assessed. Involving relevant players (e.g. environmental authorities) in the process can accelerate the provision of and access to key information. Using guiding questions that are set out in Tables 2-4 in Section 5.2, relevant parts of the project and possible impacts are identified and then assessed in more detail.

5.1.2 Step 2: Formulating and prioritising options for action

In this step, the conclusions from the analysis are drawn. First, **options for action are developed** on the basis of the analysis findings. Depending on how considerable the risks and potentials analysed are, the options may involve minor technical measures or a fundamental re-orientation of the project. If the knowledge base is still insufficient, performing further studies and analyses within the context of the project can also be purposeful, providing that cost-effectiveness is borne in mind.

Options for action are then **prioritised**. Various criteria can be applied here. These might be, for example:

General:

- The sustainability of the option (over time and with regard to the interdependencies between the three dimensions of sustainable development)
- Weighing of synergies and trade-offs with other development cooperation objectives (e.g. poverty reduction) or objects of study
- Cost-benefit ratio of the option

- Institutional barriers
- Political viability (relevance, legitimacy, political will, political credibility, adequate acceptance and ownership within and outside the political sphere, priorities e.g. in the context of the Nationally Determined Contributions etc.)
- Technical/functional viability and credibility

Specifically for the climate change mitigation assessment:

- Realistic potential for making use of climate financing mechanisms (e.g. the Clean Development Mechanism), national emission trading schemes, voluntary offsetting mechanisms, financing from the Green Climate Fund, etc.)

Specifically for the assessment of adaptation to climate change:

- The measure is appropriate and effective even if the anticipated climatic changes do not occur ('no regret' or 'low regret' measures, e.g. boosting the adaptive capacity of the target group)

The above list of criteria is not complete and can be amended or shortened as required. It is possible that a conflict of objectives may arise. **Prioritising** options for action is a **process of negotiation and evaluation.** Here, too, the partner plays an important part. There will, for example, be situations in which environmental and climate potential is not exploited. What matters is that this process is not arbitrary. If, for instance, considerable risks jeopardising the success of the project are found, the criterion of sustainability requires counter-measures to be taken. Such balancing should be documented in the annex to the environmental and climate assessment.
An important reminder: the aim is not to make every project into an environmental and climate project! It is rather to reduce environmental and climate risks and, where possible, exploit potential.

5.1.3 Step 3: Integrating the findings into the offer and documenting them

Not to be circulated further

When options for action have been prioritised, they need to be integrated into the project design at the appropriate point. They can be reflected in individual **activities** within components affected (in the BMZ programme proposal in the methodological approach), but also in **module, phase and component objectives** and their respective **indicators** and if appropriate in the section on **impacts and risks**. The results should also be entered in the relevant **results matrix**. Where **appraisal reports** have been produced, the recommendations are taken up in the appropriate part of the report in consultation with the partners. The in-depth environmental and climate assessment should be documented in detail in an annex to the environmental and climate assessment. The presentation of the relevant findings of the environmental and climate assessment should be limited to key points and can be made in a few paragraphs. What matters is that the dimension of the environmental or climate risk is shown, the potential to boost ecological sustainability and reduce emissions is set out, and the main prioritised options for action are outlined.

Special features of documentation for BMZ: The annex to the in-depth environmental and climate assessment is submitted as an annex to the programme proposal.

The form of the **documentation for projects of other commissioning parties** can be based on the annex to the in-depth environmental and climate assessment; it can also be adapted to the needs of the commissioning party, e.g. if considerably more extensive analyses are needed (e.g. for GCF applications).

Special features of documentation for BMUB IKI: In Annex 4 to IKI offers, activities that are high risk in terms of the GCF or IFC performance standards are described and their significance assessed. The information in the documentation of the in-depth assessment(s) can be transferred into the annex to the IKI application for this purpose (on the assignment of the issues in the in-depth assessments of the environment and climate safeguards to the IKI safeguards see Annex 4: Relationship between the GIZ safeguards and the IFC performance standards).

For all projects it must also be noted in the Project Processing System (PBS) whether in-depth assessments were carried out, and if so, which ones. The documentation (BMZ: annex to the environmental and climate assessment) is uploaded to the PBS as a separate document. The documentation must be saved in the PBS **by the time the offer text is approved**. The documentation of the in-depth assessments is also sent to the **Safeguards+Gender Desk**.

5.1.4 Risk categorisation

Once all the in-depth assessments have been completed, the officer responsible for the commission performs a categorisation of risks for the individual safeguards and gender issues. The highest risk assessment is then used for the project as a whole. The risk assessment is checked by the Safeguards and Gender Desk. The categories for assessing the extent to which a risk is considerable set out in Annex 2 can also be used as an aid to risk categorisation. In addition, the likelihood of unintended negative impacts occurring should also be incorporated into the risk categorisation. The greatest environmental and climate risks are to be expected from major infrastructure and investment projects. But consultancy projects that may have far-reaching impacts on sector policies or legislation and that e.g. contribute to a considerable extent to the promotion of particular economic activities that may potentially damage the climate or the environment (e.g. in the resource industry, or in high-emission industries such as the textile, leather or cement industries) may be classed as high risk if they ignore potential harm to the climate or environment and do not take sufficient steps to reduce it. Notes on economic activities that are potentially particularly damaging to the environment and/or climate can be found e.g. in the risk list of the EBRD (see Annex 3: Link list). Cooperation with sectors that are classed as high risk in that list should not automatically result in a high risk rating in technical cooperation projects; a high risk rating is only appropriate if potential negative climate and environmental impacts are ignored to a considerable extent in the project.

5.2 Elements and guiding questions of the in-depth environmental and climate assessments

5.2.1 A: Environmental assessment

Not to be circulated further

The in-depth environmental assessment analyses possible environmental risks and way of preventing them. **For BMZ projects**, the in-depth environmental assessment also identifies **potentials** and methods for improving the environmental situation and/or environmental sustainability.

The environmental assessment may also conclude that further environmentally relevant assessments (e.g. comprehensive environmental impact assessments or strategic environmental assessments) or individual studies (e.g. feasibility studies or analyses of ecological viability) are recommendable.

The environmental assessment analysis step considers protected assets, areas requiring special protection and functions requiring special protection.

Table 1: Relevant protected assets and functions requiring special protection

Protected assets	Areas requiring special protection	Functions requiring special protection
• **People (incl. human health)** • **Biological diversity** • **Soil** • **Air** • **Water** • **Climate** • **Landscape** • **Cultural and material assets**	• Rare habitats • Areas with insufficient water supply • Conurbations with particular health implications • etc.	• Ecosystem functions for people • Public supplies/services • Migration corridors for species • etc.

Sectoral user guides are available to assist this step. Important elements and guiding questions in relation to the in-depth environmental assessment are set out in Table 2:

Table 2: Elements and guiding questions of the in-depth environmental assessment

	Step 1		Step 2	Step 3
	Identification of the **environmentally relevant components** of the project and of the protected assets affected	Identification and assessment of specific **impacts and potential**	Formulation of **options for action**	**Integration** of options for action into the offer
Guiding questions:	• Which specific fields of intervention of the project could have an adverse environmental impact? • Which protected assets or areas or functions requiring special protection are affected by the environmentally relevant components of the project? • For BMZ business only: Which fields of intervention of the project can potentially contribute to improving environmental quality, resource conservation or ecological sustainability? • What are the most important environmental problems in the fields affected by the project? • How are these likely to develop over the short, medium and long term without the intervention of the project?	• What are the project's specific environmental impacts? • For BMZ business only: What specific potential is there for improving environmental quality, resource conservation or ecological sustainability? • Which of these impacts (and potentials, if appropriate) need to be given particular consideration in the further design of the project? • Where is the assessment of environmental impacts subject to uncertainty? • Where are further investigations required and how are these to be considered in further project planning?	• What options for action/measures can reduce or prevent the environmental risks? • For BMZ business only: What options for action/measures can improve environmental quality and resource conservation and boost environmental sustainability? • Prioritising options for action	How are the prioritised options integrated e.g. into the following parts of the offer?: • If appropriate: objectives and indicators • Methodological approach • If appropriate: macroeconomic, socioeconomic, sociocultural, political and environmental consideration, markers • If appropriate: risks

Not to be circulated further

	Step 1		Step 2	Step 3
	Identification of the **environmentally relevant components** of the project and of the protected assets affected	Identification and assessment of specific **impacts and potential**	Formulation of **options for action**	**Integration** of options for action into the offer
Explanation	On the basis of factors such as typical environmental impacts in the sector (see sectoral user guide), this step determines which fields of intervention or components of the project are or may be environmentally relevant. It also identifies which protected assets, areas and functions are particularly affected, e.g. the soil by certain methods of production (agriculture), the air by elevated air pollution (sustainable production and consumption), groundwater by unsuitable hazardous waste management practices, human health or biodiversity by infrastructure expansion (energy).	This involves elaborating the specific impacts or potentials, e.g. with regard to place, time/duration of the impacts, affected protected assets, impact mechanisms, etc. It is also important to consider possible interactions between the impacts and the ways in which they co-act (cumulative impacts). The identified impacts should be prioritised in order to clarify the extent to which they need to be considered in the further design of the project.	For impacts and potentials that need to be given particular consideration, options for action should always be developed and integrated into the project design. Consideration should also of course continue to be given to impacts presumed to be less harmful that can be neutralised without major effort and cost, and to potential that can deliver qualitative added value without major expenditure and cost.	The options for action that are to be included in the programme proposal/offer should be listed here. If some options for action recommended in the assessment are not incorporated into the offer, the reasons for omitting them must be given here.

Not to be circulated further

5.2.2 B: Climate change mitigation assessment

The **in-depth climate change mitigation assessment** identifies the greenhouse gas emissions to which the project may contribute or that it can influence, e.g. through consultancy (on issues such as the enabling environment, policies, technology decisions, etc.). It focuses on the impacts of the project as a result of its intervention logic and not on emissions released in the course of implementation, such as through flights, car journeys, etc. The latter are addressed through GIZ's corporate environmental management.

Options for minimising the relevant emissions are identified. Their mitigation potential is estimated and – if relevant – taken into account in the design of the project. In the logic of the GIZ results model, the climate change mitigation assessment covers both the direct and indirect results of a project.
In the majority of cases, the lack of adequate data means that **precise quantification** of mitigation potential is not possible, and it is in any case **not necessary**. Rather, the essential element is a relative comparison of different options. For this purpose it is sufficient to roughly rate mitigation potential with + and - signs:

+++ = high mitigation potential
++ = medium mitigation potential
+ = low mitigation potential
- = negative climate impact

In GIZ's work, **advisory services** are often provided at the **macro level** (e.g. provision of advice on political incentive mechanisms, laws, standards etc.). At this level it is often not possible to directly attribute the implementation of individual technical emissions-saving options to project activities (attribution gap) – and yet it is here that the potential for reducing greenhouse gas emissions is often highest. Therefore, one should at least roughly estimate the possible impact of advisory services on greenhouse gas emission reductions.

Not to be circulated further

The mitigation potential of a particular measure always depends on a variety of factors. It is therefore recommended that the initial situation and/or future scenario, the mitigation mechanism and local conditions are taken into account before the overall mitigation potential is assessed.

Sectoral user guides provide **assistance** by giving rough estimates of the mitigation potential of various options and of important framework conditions. Important elements and guiding questions of the climate change mitigation assessment are set out in Table 3:

Table 3: Important elements and guiding questions of the climate change mitigation assessment

	Step 1	Step 2	Step 3
	Initial situation and future scenario	Identification and assessment of mitigation options and **options for action** to be taken into account in the methodological approach	**Consideration** of the prioritised option(s) in the offer
Guiding questions	• How would greenhouse gas emissions develop without the present project? • To what emissions may the project directly or indirectly contribute? • BMZ only: What potentials for emissions reductions can the project promote?	• Which emissions-reducing options (management processes and technologies) could be supported while retaining the project objective? • By what path does the option in question lead to a reduction in greenhouse gas emissions? • What general mitigation potential has been assigned to the option? (Sectoral user guide: scale from + to +++) • What factors influence the extent of the mitigation impact? • To what extent and in what way can the option be extended in the present project? • What options for action/measures can to a particular extent reduce or prevent the emissions? • Which options are to be preferred and selected on account of the criteria and conditions specific to the project?	How are the prioritised options integrated e.g. into the following parts of the offer?: • If appropriate: objectives and indicators • Methodological approach • If appropriate: macroeconomic, socioeconomic, sociocultural, political and environmental consideration, markers
Explanation	Consider the **initial situation and future scenario**, as the specific mitigation potential can depend upon this. Describe the emissions that may be influenced directly or indirectly by the project.	Draw up a list of possible mitigation options (**brainstorming**). Describe which **greenhouse gases** can be reduced by the option and **in what manner.** Use the mitigation potential assigned to different options in the sectoral user guides (column 4). Determine what local conditions influence the **mitigation potential** of the option. Draw up a **ranking of the options with the highest mitigation potential**, taking into account the local conditions and the mitigation potential given in the sectoral user guides. Use the sectoral user guides (last two columns) to identify possible measures by the project.	The options for action that are to be included in the programme proposal/offer should be listed here. If some options for action recommended in the assessment are not incorporated into the offer, the reasons for omitting them must be given here.

Not to be circulated further

	Step 1	Step 2	Step 3
	Initial situation and future scenario	Identification and assessment of mitigation options and **options for action** to be taken into account in the methodological approach	**Consideration** of the prioritised option(s) in the offer
Example	Waste management: methane emissions from landfills; without intervention **rising methane emissions** due to increased quantity of waste and improved collection and central storage as a result of the project's support.	**Option A: Methane capture** by covering the landfill, **methane degradation** by combustion (conversion of methane into CO_2 -> reduction by a factor of 21) In addition, **use of the gas as an energy resource** substitutes emissions from other forms of energy generation. **Option B: Composting, reduction of methane production** in landfills by pre-treating the organic waste fraction **Mitigation potential of Option A** according to the sectoral user guide: + (fairly low) Very large organic fraction in the waste: +++ (increases the mitigation potential from that quoted in the sectoral user guide) All landfills in the project area with similar conditions, demand for gas is high: +++ (extension of the option easily possible) Overall assessment of the mitigation potential of the option: ++ **Mitigation potential of Option B** according to the sectoral user guide: ++ (medium) Very large organic fraction in the waste: +++ (increases the mitigation potential from that quoted in the sectoral user guide) Limited scope for segregated waste collection, demand for compost is high: ++ (limited extension of the option is possible) Overall assessment of the mitigation potential of the option: +++ **Possible measures by the project** (examples): *At national level:* Support for more favourable regulations to enable profitable feed-in of electricity generated from landfill gas *At local level:* Supporting the closure of open landfills Advising on the operation of plant for capturing and using landfill gas Advising on setting up a collection and recycling system for organic waste	Advising on the operation of plant for capturing and using landfill gas Advising on setting up a collection and recycling system for organic waste Advising on national regulations was not included, because this would require extensive changes in the partner setup in the present project and the opportunities for influence are rated as low.

Not to be circulated further

5.2.3 C: Assessment of adaptation to climate change

The aim of the assessment of adaptation to climate change is to investigate whether the intended development outcomes of a project may be adversely affected by the expected impacts of climate change and whether the project may reduce the adaptive capacity of target groups or ecosystems – i.e. their ability to adapt to climate change. If this is the case, measures are identified that boost adaptation to climate change and/or adaptive capacity. For BMZ projects – irrespective of risk – the potential for improving adaptive capacity is also assessed. A further aim is to actively exploit any usable aspects of the impacts of climate change (such as utilising longer vegetation periods in agriculture in temperate or cold zones).
To assist the climate change adaptation assessment, sectoral user guides are available for the sectors particularly affected by climate change. They contain descriptions of typical impact patterns and possible adaptation measures.

Guiding questions and explanations in relation to the climate change adaptation assessment are set out in Table 4:

Handling uncertainties:
In connection with adaptation to climate change, reference is often made to the uncertainties attaching to underlying information. There is also growing uncertainty about many other interactions between the dimensions of sustainable development (terms such as 'complex systems' and 'wicked or unstructured problems' are used). There are indeed uncertainties, for example in relation to the forecasts produced by climate scientists. Nevertheless, the most improbable of all possibilities is that climatic conditions will remain as they are. Decisions therefore need to be taken in the face of uncertainty. Some points are worth noting:

- Uncertainties with regard to temperature changes are generally small; for highly localised phenomena, such as precipitation, however, uncertainties can be high.
- It is important to consider not only the projections produced by climate science but also the historical developments of climate change from which trends can be derived.
- If the uncertainty about the impacts of climate change is large, measures should be identified that either generally increase the adaptive capacity (meaning the capacity to cope with climate change) of the target group or that make sense in terms of development policy, even if the anticipated impacts of climatic changes do not occur ('no regret' measures).
- It should be remembered that decision-making under uncertainty is common practice in many other fields, e.g. with regard to technological or macro-economic developments.
- Uncertainty of knowledge can take various forms – for example, the statistical probability that particular events will occur, an inadequate information base or contradictory interpretations of the information. Case studies have shown that the uncertainty attaching to the underlying information increases if a large number of disparate interests – who have presumably interpreted the same information – are involved and if a large number of studies have been conducted by different stakeholders. It is therefore important to work together to assess and evaluate the degree of uncertainty. Even a good study cannot ultimately replace (political) discussion of what assumptions, values, norms, objectives and methods (!) should guide behaviour, how much risk and uncertainty is acceptable and which options will produce consensus.
- In the interests of broad acceptance (i.e. credibility, relevance and legitimacy), the degree of uncertainty and the logic of the decisions taken should then be recorded and communicated transparently.

Table 4: Important elements and guiding questions in relation to the climate change adaptation assessment

	Step 1		Step 2	Step 3
	Anticipated **climatic changes**	Biophysical and socioeconomic **impacts on components of the project** and **unintended negative impacts** of the project on adaptive capacity	Analysis of **options for action**	**Consideration** of options for action in the programme proposal
Guiding questions	What changes in climate are to be expected over the next 30 years in the region in which the project operates?	What biophysical impacts may the anticipated climatic changes have on the project's components? What socioeconomic impacts may the anticipated climatic changes have on the project's components? How high is the probability of occurrence, the extent of damage, and the adaptive capacity of target groups or ecosystems? In what way may the project impact negatively on the climate resilience of people and/or ecosystems? Is there a need for action as a result?	What measures can prevent, reduce or mitigate the negative biophysical and socioeconomic impacts of the climatic changes? What measures can prevent the project having a negative impact on climate resilience? BMZ only: What measures can exploit the benefits of the climatic changes? What measures can boost adaptive capacity?	How are the prioritised options integrated e.g. into the following parts of the offer?: • If appropriate: objectives and indicators • Methodological approach • If appropriate: macroeconomic, socioeconomic, sociocultural, political and environmental consideration, markers • If appropriate: risks

Not to be circulated further

	Step 1		Step 2	Step 3
	Anticipated **climatic changes**	Biophysical and socioeconomic **impacts on components of the project** and **unintended negative impacts** of the project on adaptive capacity	Analysis of **options for action**	**Consideration** of options for action in the programme proposal
Explanation	Here information on climate trends is gathered. Often only trends can be identified, but no precise statements made.	Here the components of the project that are at risk due to climatic changes are identified. The level of aggregation may vary, e.g. agriculture in general, a value chain, or a particular highly important crop. Impacts upon ecosystems, water and soils etc. are initially identified. The resulting impacts on people and their economies are then identified. The distinction between 'biophysical' and 'socioeconomic' merely serves to assist analysis – the precise boundary is not important. It is quite possible that entire 'impact chains' are identified: aridity => harvest decline => income loss => migration This step serves to select impact chains and action options for further consideration. Possible unintended negative impacts of the project on adaptive capacity are also analysed at this stage.	With the help of the last two columns in the sectoral user guides, identify possible options for action.	
Example	Sea-level rise	Agriculture in coastal zones is adversely affected by sea-water intrusion and salination Deterioration of water quality for agriculture Need for action is high: sea-level rise is already observable, low adaptive capacity	• Adapt promotion policies and planning for coastal zones • Weather insurance schemes • Ecological protection systems (e.g. mangroves) • Breed and introduce new, salt-tolerant grass and crop varieties • Reduce the salt content of the soil by growing salt-extracting plants	

Not to be circulated further

	Step 1	Step 2	Step 3
Anticipated **climatic changes**	Biophysical and socioeconomic **impacts on components of the project** and **unintended negative impacts** of the project on adaptive capacity	Analysis of **options for action**	**Consideration** of options for action in the programme proposal
Water scarcity	Irrigated agriculture in coastal zones could contribute to water scarcity as a result of climate change.	• Draw up strategies for managing water resources	

Not to be circulated further

6 Annexes: Sources and information

6.1 Annex 1: Sectoral user guides

Sectoral user guides

6.2 Annex 2: Criteria for assessing whether a risk or potential is considerable

Criteria specified in the BMZ guideline	Guiding questions for assessing the criterion	Examples of components that can potentially lead to considerable impacts
Extent of the anticipated impacts	How many persons are affected by the impacts?	Preparation of an action plan for waste incineration with facilities located in densely populated areas
		Densely populated areas in the inundation zones of mega-deltas (danger of increased flooding)
	What absolute areas are affected?	Land-use planning for broad-scale areas
		Climate-sensitive ecosystems (broad-scale changes caused by new climatic conditions)
	Are transboundary impacts anticipated?	Water catchment management for transboundary river systems
	What proportion of natural resources (soil, water, minerals, energy) is involved?	Agricultural or urban development action plans that lead to considerable expansion of water demand
	Do the existing climatic conditions already exceed current management capacities?	Health systems in regions with extreme climatic conditions (significant danger of dehydration, circulatory problems etc. if temperatures rise)
	What quantity of pollutants, effluent discharge, waste etc. is directly released by the project (low (1) – medium (2) – high (3))?	Technology transfer for production processes involving considerable or potentially toxic production of effluent (e.g. processing of plastic waste, textile/leather industry)
	What is the scale of greenhouse-gas-related processes (number of facilities, buildings, hectares, quantity of waste, etc.)?	Rural development measures involving expansion of rice cropping area
Frequency, duration and expected timing of the expected impacts	How often are the impacts expected to occur (rarely (1) – often (2) – constantly (3))?	Development of landfills with frequent deliveries passing through settlement areas
		Insurance systems in arid or flood-prone regions (increased risk of loss due to climate change)
	Do impacts occur during sensitive times of the day (night-time, rush hour, when children are going to school etc.) or seasons (harvest cycles, dry/rainy period)?	Development of commercial zones with shift work in densely populated structures
		Promotion of hydropower (e.g. if water availability drops in the dry season)
Sensitivity of the affected ecosystems, population groups and economic activities to environmental and	Are there ecologically sensitive or climate-sensitive areas such as wetlands, water bodies, coastal areas, mountain ranges or forest in the region affected by the project?	Development of strategies for broad-scale vector control programmes in wetlands

Not to be circulated further

Criteria specified in the BMZ guideline	Guiding questions for assessing the criterion	Examples of components that can potentially lead to considerable impacts
climatic changes, and their adaptive capacity	Are there areas of high scenic value in the region affected by the project?	Tourism development in particularly scenic coastal areas
	Does the region affected by the project contain areas that are internationally or nationally protected because of their environmental or cultural values or that are of important cultural significance for indigenous people?	Regional development programmes in regions containing conservation areas
	Are there sensitive institutions (such as hospitals, schools, homes for the aged) in the region affected by the project?	Waste management action plans involving collection facilities at hospitals and schools
	Are there particularly densely populated areas in the region affected by the project?	Micro-SME development activities in slum areas
Irreversibility of changes	Is resource consumption irreversible (e.g. no groundwater recharge)	Irrigation schemes in areas with existing groundwater recharge deficits
	Are there further impacts that cannot be reversed by technical measures or that do not dissipate with time?	Settlement development in pristine areas
Provisions made in laws and regulations (e.g. pollutant limits)	Do statutory provisions established by the partner country apply to the impacts of the project?	Commercial zone management involving companies requiring licences under environmental law
	Is it likely that statutory limits will be exceeded?	Agricultural development involving fertiliser use in areas with many water bodies (danger of exceeding permissible limits laid down in water law)
	Are statutory provisions or incentive systems in place that impact greenhouse gas emissions?	Feed-in payments for energy from renewable sources (such as biogas); prohibition of or obligation to use certain technologies

Not to be circulated further

6.3 Annex 3: Link list

Environmental and climate assessment in general

- IFC Performance Standards on Environmental and Social Sustainability
- Environmental, Health, and Safety Guidelines of the World Bank Group/IFC

Sources of information for the environmental assessment

- IUCN Environmental Law Centre
- The BMZ manual on the identification and assessment of environmental impacts
- National MDG country reports, in particular MDG 7
- National action plans, strategies and reports on biodiversity
- Country Environmental Analyses (CEA) of the World Bank, Country Environmental Profiles (CEP) of the EU and Country Environmental Assessments (CEA) of the ADB provide a good overview of a country's environmental situation.

Sources of information for the climate change mitigation assessment

- Greenhouse gas inventories in the National Communications
  These documents to be submitted by developing countries normally contain an inventory of greenhouse gas emissions broken down by sector and gas.
- UNFCCC Registry of Nationally Determined Contributions
- World Resources Institute: Climate Analysis Indicators Tool (WRI-CAIT)
  This tool allows analysis of GHG emissions by country, region and gas and makes it possible to depict trends. Full access to the tool requires registration (quick and free of charge), stating a username and the user's e-mail address.
- IPCC Intergovernmental Panel on Climate Change
  The Fourth Assessment Report of the Panel, which is made up of the world's most eminent climate scientists, is very lengthy and should be read very selectively: the sectoral discussions in the contribution of Working Group III are the most helpful with regard to mitigation options.
- IEA Statistics and the UN Statistics Division provide energy and climate data sorted by country and source.

Sources of information for the climate change adaptation assessment

- National Adaptation Plans (NAPs) submitted to UNFCCC
- Vulnerability Sourcebook
- World Bank Climate Change Data Portal, UNDP Adaptation Learning Mechanism and GIZ/PIK CI-Grasp provide a wide range of country-specific climate information.
- UNFCCC Registry of Nationally Determined Contributions
- IPCC Intergovernmental Panel on Climate Change
  The Fourth Assessment Report of the Panel, which is made up of the world's most eminent climate scientists, is very lengthy and should be read very selectively:
  - Chapter 11 by IPCC Working Group I on regional climate projections.
  - Chapter 9ff. by IPCC Working Group II on regional impacts and vulnerabilities in Asia, Africa, Latin America, Europe, the polar regions and small islands.

Not to be circulated further

- National Adaptation Programmes of Action (NAPA)
  These documents present adaptation priorities and information on climatic changes and adaptation measures for all Least Developed Countries (LDCs) (and only for these).
- National Communications to the UNFCCC
  The National Communications to be published by developing countries normally summarise key findings on country-specific climatic changes and adaptation options.

Sources of information on risk categorisation

- EBRD Environmental and Social Risk Categorisation List – Revised 2014

Not to be circulated further

6.4 Annex 4: Relationship between GIZ safeguards and the IFC performance standards

IFC Performance Standards	GIZ Safeguards+Gender Management System
PS1: Assessment and Management of Env. and Social Risks and Impacts	GIZ safeguards
PS2: Labor & Working Conditions	Human rights
PS3: Resource Efficiency & Pollution Prevention	ECA (in-depth environmental assessment and in-depth climate mitigation assessment)
PS4: Community Health, Safety & Security	Human rights, conflict and context sensitivity
PS5: Land Acquisition & Involuntary Resettlement	Human rights, conflict and context sensitivity
PS6: Biodiversity Conservation & Sustainable Management of Living Natural Resources	ECA (in-depth environmental assessment and in-depth assessment of adaptation to climate change), human rights, conflict and context sensitivity
PS7: Indigenous People	Human rights, conflict and context sensitivity
PS8: Cultural Heritages	ECA (in-depth environmental assessment), human rights, conflict and context sensitivity
Gender	Gender strategy, gender analysis