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CEDRIG Operational

Guide for users and facilitators

Impressum

CEDRIG Operational
Guide for users and facilitators

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Content

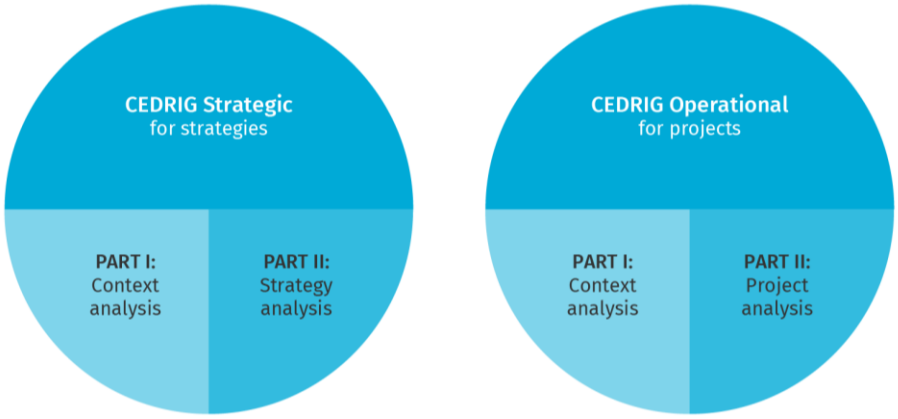
1. Introduction to "CEDRIG Operational: Guide for users and facilitators"

Tackling risks emanating from **climate change, natural hazards and environmental degradation** (Climate, DRR, Environment, C/D/E) in an integrated manner is one of the greatest challenges today. Developing countries are particularly vulnerable to those risks, due to their limited coping capacities to handle the changes. With that, effects of climate change are a major threat to development and jeopardize achievement of the sustainable development goals and other jointly agreed targets. In addition, drastically cutting greenhouse gas (GHG) emissions, avoiding environmental degradation and preventing the building-up of new risks is a key challenge for all countries.

The Climate, Environment and Disaster Risk Reduction Integration Guidance (CEDRIG) is a practical and user-friendly tool developed by the Swiss Agency for Development and Cooperation. It helps **you systematically C/D/E into development cooperation and humanitarian aid** so that your interventions can enhance the overall resilience of systems and communities.

The CEDRIG online tool comes in **two modules** (see Figure 1). CEDRIG Strategic applies to country and domain strategies, cooperation frameworks, and programme frameworks. **CEDRIG Operational applies to projects and programmes.**

Figure 1: Overview: CEDRIG Strategic and CEDRIG Operational



This document provides a **comprehensive overview of the CEDRIG Operational module** and brings together all the instructions and guidelines that are part of the online tool. It is intended for users of CEDRIG Operational as well as facilitators of CEDRIG workshops. While it does not have the function of an offline tool, it allows you to print and download the complete set of instructions.

2. CEDRIG Operational Guide

Thematic Integration Briefs

SDC has developed Thematic Integration Briefs (TIBs) that are structured along the CEDRIG approach, and provide compilations of the interrelations between a development sector, and climate change, disaster risk and the environment (C/D/E). The TIBs may give inspiration, and are meant to support the CEDRIG way of thinking about these interrelationships in all modules, and all steps of the studies. The aims are to:

- Help users understand the potential risks for a sector, project or system
- Highlight possible adverse impacts of development sectors on climate, disaster risk and the environment
- Offer practical advice on options for integrating C/D/E considerations into the sector of interest, and show how to add value, assure greening, and risk-proof the sector

Please note that the starting point should always be a specific context analysis and local expertise.

The following TIBs are available:

- Climate, DRR & Environment and **Food Systems**
- Climate, DRR & Environment and **the Health Sector**
- Climate, DRR & Environment and **Migration and Displacement**
- Climate, DRR & Environment and **Water Management Systems**
- Development Cooperation and Humanitarian Aid and **Biodiversity**

Please contact the SDC CDE Focal Point, should you have suggestions for relevant information on Thematic or Sectoral integration.

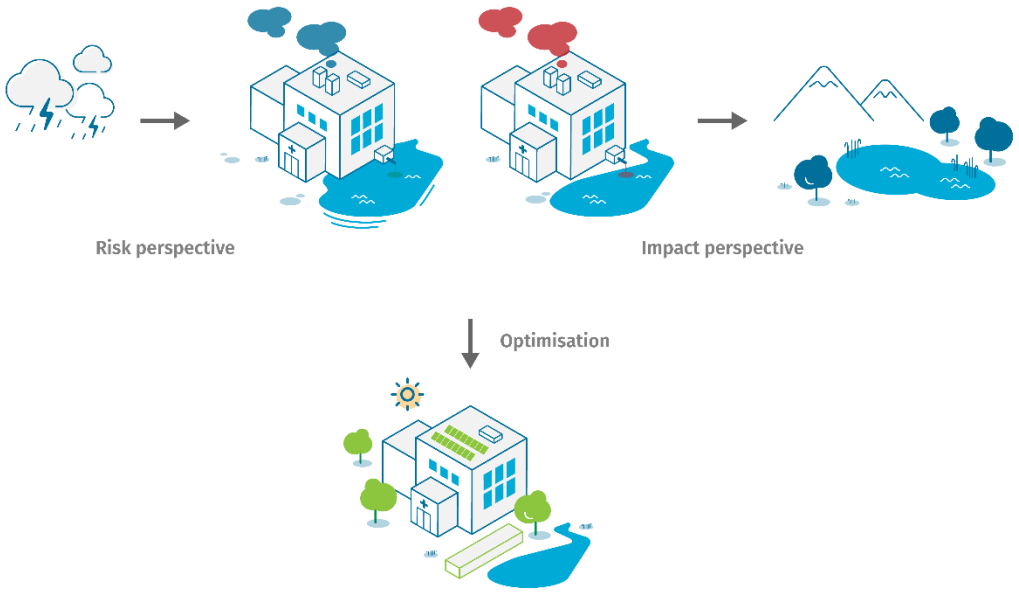
Overview

Introduction to CEDRIG Operational

The aim of the CEDRIG Operational module is to systematically integrate climate change, environmental issues and natural hazards at the project level. CEDRIG Operational includes two parts – **Part I: Context analysis** and **Part II: Project analysis**. It leads you through a process to determine whether or not project goals, aims or priorities are at risk from climate change, environmental issues or natural hazards **(Risk Perspective)**, and helps you determine whether the project may have adverse effects on the climate or the environment, or whether it creates or exacerbates risks **(Impact Perspective).** With these analyses, the tool helps define measures to integrate C/D/E into your project activities, capture entry points for the creation of positive impacts on C/D/E, and create and make use of synergies and co-benefits with existing initiatives, projects and actors.

Integrating C/D/E in project planning and implementation increases the resilience of systems and communities, and makes your project investment more sustainable.

Figure 2: Risk and impact perspectives



Parameters of the study

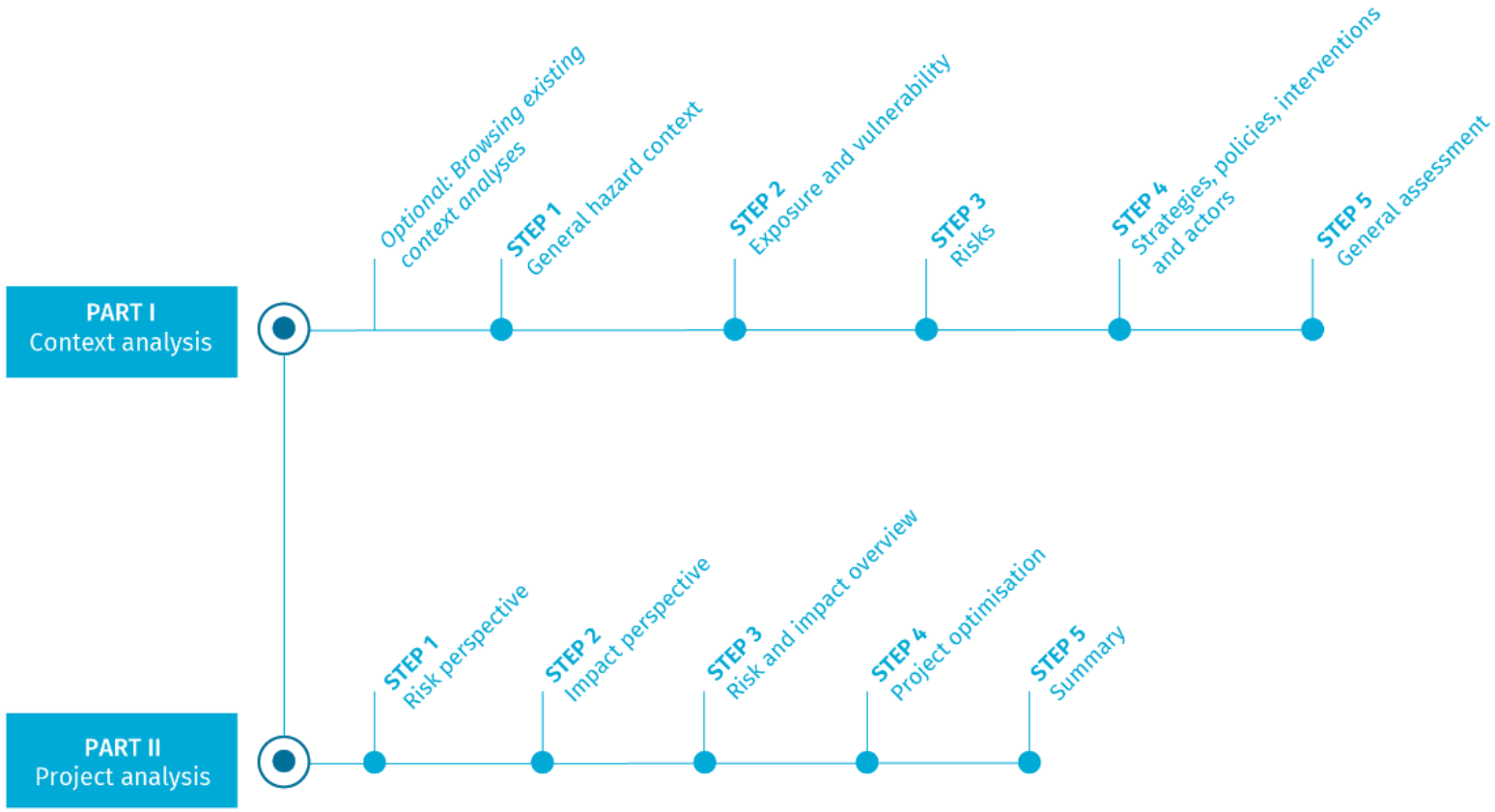
- **How**: CEDRIG Operational is intended as a multistakeholder workshop, and is applied to ongoing or planned projects. The CEDRIG Operational Module is often used for training and awareness purposes.
- **Who**: CEDRIG Operational involves key staff and selected partners. An external facilitator familiar with the CEDRIG tool is recommended.
- **When**: Ideally, CEDRIG Operational is applied at the very beginning of the planning process of a project or at the mid-term review.

Structure of the study - The study is structured into two parts (see Figure 3):
Part I: The starting point is an in-depth context analysis in the project area. Part I of this module shows how to establish the context analysis – describing the climate change, disaster risk and environmental conditions; the exposure and vulnerabilities; and the coping capacities in the project area. This context analysis can be carried out either at the outset of, or prior to, the CEDRIG workshop. In the latter case, results should be validated with the participants at the beginning in order to provide common ground for the subsequent assessment.
Part II: Part II of the study consists of a project analysis that assesses the interactions between the project and the context of climate change, disaster risk and environmental degradation. A project document describing the main components of the project, and possibly a logical framework, should be available to support the development of the project analysis.

Result - Applying CEDRIG Operational helps achieve three complementary goals:

- Creation of a shared understanding of the relevance of climate change, disaster risk reduction and environmental issues
- Identification of possible risks that may affect the targeted achievements of the project and potential adverse impacts of the intervention
- Integration of necessary measures and/or risk reduction options into the project (possibly in the results framework)

Figure 3: Overview of CEDRIG Operational Study



General information

Provide general information on the project that is analysed in this study, including keywords that shall help to search for similar studies in the future.

- **Study title:** Self-explanatory project title
- **Cover image (optional):** Upload a cover image for your analysis
- **Overall goal:** Information on the overall goal of your project
- **Country:** Information on your project's country or countries of implementation (up to eight countries can be selected.)
- **Thematic domain (optional):** Provide information on the development domain your project is tackling. The domain name may be specific to your organisation or region and can include several sectors of intervention.
- **Sectors of intervention:** Provide information on the sector(s) of intervention of your project. At least one sector needs to be selected from the dropdown menu – if you select 'other', please specify.
- **Specify study area(optional):** Provide information on the specific geographic area(s) of your project. This may be national, regional, provincial, or other sub-national area(s).
- **Duration and dates:** Expected duration of the project (month and year: 6/2024–12/2028, e.g.).
- **Budget (optional):** Provide information on the overall budget and currency for the specified duration.
- **Summary:** Briefly describe your project. Specify main components including project goal, objectives, outcomes, outputs and activities.
- **Keywords:** Keywords facilitate specific searches for studies and promote learning from each other. Keywords can be sectors of intervention (see above), and/or ecological zones (such as arid/semi-arid zones, tundra, mountain ecosystems, tropical/sub-tropical forests, primary forests, small islands, coastal regions, lake/lagoon zones, deltaic areas, flood plains, alluvial fans, peatlands), and/or beneficiaries, and/or any other relevant characteristic of your project.

Note that you can 'copy-paste' from your existing project document.

Team

The CEDRIG tool allows several authors and editors to work simultaneously on the same study. Select your team members by inserting their email address.

Assign the following roles for your team members:

Authors are the study owners. They can:

- Add and remove authors, editors and guests from the study
- Edit all sections and fields
- Create PDF and Microsoft Word reports of the study
- Decide if the context analysis should be shared with other users or studies (where applicable)

Editors can:

- Edit all sections and fields in the study
- Create PDF and Microsoft Word reports of the study

Guests are invited to view this study. They can:

- Follow the progress, and access all study information and phases (without editing rights)
- Create PDF reports of the study

Note that suggested team members need to validate by return email.

Attachments

Upload key and background project documents and images that are relevant to your study, as well as logos of your project.

To add a new document, click on the 'add document' button below the table.

- **Title**: Enter the title of the document.
- **Description:** Describe the content of the document and its role in the analysis.
- Check the **private** option for documents and images (credit proposals, workshop pictures, etc.) that are not intended for the public. Private documents are visible to the authors, editors, and guests, but not to outsiders, nor to the CDE Focal Point at SDC Head Office (even if the study is published).
- **Upload** key and background project documents here.
- Enter the **title** of your logo.
- **Upload** the logo.

Part I. Context analysis

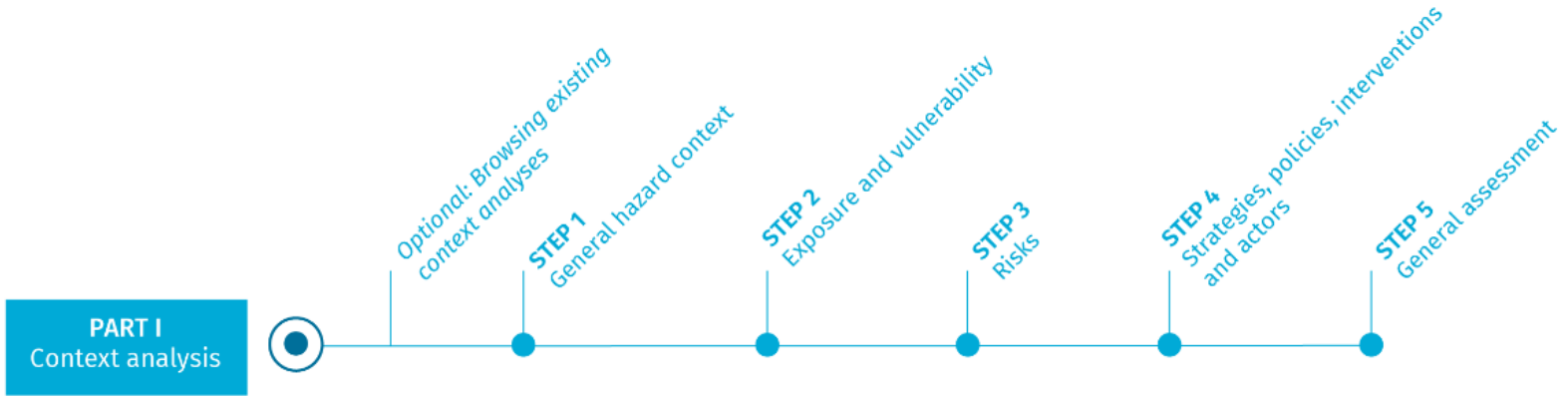
Introduction

The systematic integration of climate change, natural hazards and environmental issues at the project level depends on a sound analysis of the national (or sub-national) context in which the project operates. This analysis includes information on the general hazard context, the exposure and vulnerability of targeted domains and sectors, and risks. Furthermore, it implies an understanding and a general assessment of existing national or local strategies, policies, interventions and actors. Here are the proposed options for establishing your project-specific context analysis:

- **Browse existing** context analyses shared by CEDRIG users, perform a quality check and amend them according to your project setting
- **Outsource** your context analysis and share the findings with all participants at the outset of Part II, the project analysis; if the context analysis is not done by team members, they still need a common understanding of this backbone of the project analysis
- **Create** a new context analysis by following Steps 1–5

- Do not define the geographical boundaries of the context analysis too narrowly. In most cases, a national focus is reasonable – in sub-national regions with high autonomy, a sub-national context analysis might be most appropriate – and remember that national events can have secondary effects at the local level e.g. when entire sectors (energy, agriculture, etc.) are affected.
- Proceed to Steps 1–3 to find links to relevant information and resources.
- For accurate information and decisions, consider seeking context-specific and thematic expertise and technical assistance.
- Template Terms of Reference (ToRs) to outsource the context analysis can be found here (access restricted to registered members of the SDC CDE network only).

Figure 4: Overview of Part I: Context analysis



Existing context analyses for inspiration (optional)

Browse for existing context analyses for inspiration for your own context analysis. You may read, download or reuse analyses that have been created in the CEDRIG tool by adapting them to your specific and actualised domain context or upload an existing context analysis. If you want to create a new context analysis, then go to the next step.

The following functions are available on this page:

Select context analysis or search other existing context analysis

- **Filter**: Filter or search by country, region, or keyword (sector, domain, ecosystem, topic, etc.)
- **Preview**: If the analysis of interest is publicly available, you can preview and download this context analysis, and add it to your own study if applicable
- **Request access:** If the analysis of interest shows 'access on demand', you may 'request access' of the author, who can then share it with you by email
- **Upload context analysis:** Upload a context analysis from outside the CEDRIG tool here
- **Add to study**: Click this button to make use of an existing context analysis in your study

The analysis that you have selected or uploaded will appear in the pop-up section **selected context analyses**. By clicking on 'preview and edit review', you may review the content of the selected analysis and assess whether it is complete and accurate for use in your own analysis. By clicking on 'remove from study', the selected analysis is removed.

Selected context analysis: This window will pop up and display the selected or uploaded context analysis. You can verify the accuracy, and adapt the context analysis for your own context (by clicking on 'preview and edit review'), or make use of the available information for your inspiration.

- **Preview and edit review:** Use this field to check the analysis, edit, and/or download it
- **Remove from study:** If you wish to add a different context analysis to your study, the currently open context analysis needs to be removed
- **Search another existing context analysis:** You can preview other existing context analyses, but you can only add one context analysis to your study (via the 'add to study' function) at a time (you may need to click 'remove from study' to remove a previously opened context analysis, or you can download several context analyses as Word documents for your inspiration)

Note that the option to use an existing context analysis as a basis for the present context analysis mainly makes sense if various projects are developed within the same context (e.g. for the portfolio development of a cooperation office). Context analyses should always be adapted to the specific characteristics of the sector or domain of work.

Step 1. General hazard context

In describing the general hazard context in Step 1, consider the current natural and environmental hazards, the primary causes of environmental degradation, pollution and greenhouse gas emissions, and projections related to climate change. You may get information from existing context analyses and from trusted data sources, and you may want to consult an expert.

Describe the general hazard context by following the questions below. You may also find the definition of terms *risk* and *hazard* below.

Current natural hazard situation

- Which natural hazards are dominant in the project context?
- Which natural hazards lead to the most frequent damage?
- Which lead to the greatest damage?

To identify the most relevant hazards, you can gain insight on the frequency and extent of such events by consulting national disaster statistics or surveys on past events and by interviewing local residents. Remember that people's memories tend to focus on the most recent event, which is often not the most significant one.

Current environmental hazard situation

- Which environmental hazards are dominant in the project context?
- Which environmental hazards lead to the most frequent damage?
- Which lead to the greatest damage?

Primary causes of environmental degradation, pollution, and greenhouse gas emissions

- What are the primary causes of greenhouse gas emissions?
- How are they expected to change in the near future?
- What are the main causes of environmental degradation or pollution, and what trends are expected to continue?

Climate change trends and projections

- How are hazardous events and environmental issues expected to evolve in the future?
- What are the climate change scenarios?
- How is climate change expected to affect the hazard and the environmental characteristics?
- Are any other trends relevant?

Climate change often exacerbates existing hazards. The expected effects of climate change need to be assessed based on climate scenarios that generally bear an uncertainty. Sources of information are given below. They should be complemented by local or international expertise.
Gathering information on historical severity, extent and frequency of hazards can help you obtain a sense on whether these parameters have changed and in general whether climate variability has increased or not.

Definition: Hazard
According to the United Nations Office for Disaster Risk Reduction, a hazard is 'A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation.' This analysis focuses on natural and environmental hazards as well as on climate change trends and projections.

Note that hazards can occur as sudden events, and as slow onset events that develop over time.

- **Examples of natural hazards**: heatwaves, extreme cold, heavy snowfall, hail storms, drought, storms/tornados/hurricanes/strong winds/sandstorms, volcanic eruptions, earthquakes, tsunamis, mudslides/landslides, rock-/snow-/ice-avalanches, (flash) floods, debris flows, and wildfires
- **Examples of environmental hazards**: desertification, deforestation, degradation (land, soil, ecosystems, biodiversity), soil pollution, salinisation, water pollution (surface and subterranean), air pollution, pests and epidemics, and chemical hazards (pesticides, chemicals)
- **Examples of trends due to climate change**: higher mean annual temperatures, lower mean annual temperatures, increase in average rainfall, decrease in average rainfall, changes in frequency and intensity of climatic extreme events and associated disasters (e.g. cold waves and heatwaves, floods, drought, storms, hurricanes, cyclones), shifts in season, rising sea levels and increased coastal erosion, acceleration of desertification and soil erosion processes.

Useful data sources and links on hazard:

- RiskChanges, an open-source, cloud-based spatial decision support tool, developed by University of Twente in collaboration with the Asian Institute of Technology
- *UN Common Country Analysis,* if available via web search, or contact your country focal point
- *IPCC AR 6 Regional Factsheets*
- GFDRR Disaster Risk Country Profiles
- SDC Climate Change Foresight Analysis Report
- World Bank country climate and development reports (CCDRs), which are particularly interesting for strategic purposes
- World Bank Group Climate Risk Country Profiles
- INFORM Risk Index & Climate Change Tool
- DESINVENTAR: detailed DRR information covering 82+ countries (hosted by UNDRR)
- EM-dat international database on past disasters with core data on occurrence and effects of disasters from 1900–present by country (free registration)
- Integrated Biodiversity Assessment Tool (IBAT) one-stop shop for rapid visual screening for biodiversity risks
- UN Biodiversity Lab: spatial data and analytics for biodiversity-related decision-making with 600 global data layers (organised in Data collections)
- WWF Risk Filter Suite: screening tool to identify biodiversity and water risks and prioritise action (with a focus on private sector financial institutions)
- Land Degradation Neutrality Decision Support Systems (see WOCAT)

Definition: Risk

According to the IPCC glossary, risk is 'the potential for adverse consequences for human or ecological systems, recognising the diversity of values and objectives associated with such systems. In the context of *climate change*, risks can arise from potential *impacts* of climate change as well as human responses to climate change. Relevant adverse consequences include those on lives, *livelihoods*, health and *well-being*, economic, social and cultural assets and investments, infrastructure, services (including *ecosystem services*), *ecosystems* and species.'

In the context of climate change impacts, risks result from **dynamic interactions between climate-related *hazards* with the *exposure* and *vulnerability*** of the affected human or ecological system to the hazards.

Figure 5: Function of Risk (Source: IPCC AR5 Conceptual Framework)

Find more on the definition of risk in IPCC, 2012: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation.

Step 2. Exposure and vulnerability of targeted domains and sectors

Explain the potential exposure of people, property and critical infrastructure to the identified hazards and describe the overall vulnerabilities in your context with regard to the hazards.

Definitions:

Exposure

UNDRR defines **exposure** as "the situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas."

In this analysis, it is also important to recognise whether **critical infrastructure** is affected, which can lead to a much greater (spatial) impact of an event than the actual extent of the hazard event. Critical infrastructure typically includes **energy, finances, information & communication, public administration, public health, public safety, transport, food, water and waste disposal**.

Examples of exposure include the following:

- Coastal populations exposed to rising sea levels and storm surges, or communities in drought-prone areas facing water shortages.
- High exposure (and vulnerability) of power plants or power lines towards earthquakes, floods and storms may cause serious large-scale restrictions on power supply for the region.
- Critical road sections (e.g. bridges) exposed to earthquakes, flooding or landslides may lead to accessibility problems of remote villages.

Vulnerability is defined by physical, social, economic and environmental factors or processes that increase the **susceptibility of an individual, a community, assets or systems to the impacts of hazards**. Vulnerability determines how susceptible a community or system is to the damaging effects of a hazard. The lower the vulnerability, the higher the resilience, meaning that the ability of a system to prevent, respond to, or recover from a hazardous event is greater.

Although vulnerability typically depends on the type and location of a hazardous event, certain elements, such as poverty and the absence of social networks or support systems, can generally exacerbate or influence vulnerability.

CEDRIG suggests describing vulnerability by its physical, social, economic and environmental factors:

- **Physical factors** include poor design and construction of the built environment; unregulated land-use planning; limited official recognition of risks and preparedness measures; infrastructure vulnerabilities (homes, shelter; transportation infrastructure: roads, railways, ports); water and sanitation infrastructure; health infrastructure; power generation and transmission infrastructure; schools, information and communication technology; manufactured goods, tools, and equipment
- **Social factors** include the susceptibility of a group or individual to harm or discrimination due to their identity, status, or relationships; poverty and inequality; poor social resources, lack of access to services (such as access to early warning, social services, education, healthcare), including lack of informal networks or social safety nets, lack of access to information, poor knowledge of risk; poor health; pressure to live in unsafe locations due to economic conditions; lack of public information and awareness
- **Economic factors** include lack of (access to) resources and means to withstand or recover from disasters because of limited financial resources, credit, or insurance opportunities; an uninsured informal sector; vulnerable livelihoods or low income from employment, trade or remittances; the inability of an economy to withstand or recover from shocks related to

dependence on single industries or sectors or the globalisation of business and supply chains; lack of official policies and strategies for risk finance

- **Environmental factors** include poor environmental management and overexploitation of natural resources; a decline in risk-regulating ecosystem services; and maladaptation to hazards and climate change.
- Positive factors that increase the ability of people and systems to cope with hazards are defined by the **Coping Capacity** (UNDRR link).

Read more on the **Components of Risk** on PreventionWeb (link).

Social or Structural Vulnerabilities may provide a deeper analysis of vulnerabilities:

- Social Vulnerabilities: Sing, S., Eghdami, M. and Singh, S. (2014): The Concept of Social Vulnerability: A Review from Disasters Perspectives, visited in July 2024 (link)
- Structural Vulnerabilities: United Nations (2024): High level panel on the development of a Multidimensional Vulnerability Index – Final Report, visited in July 2024 (link)

Further data sources and links:

- IPCC AR6: Fact Sheets for relevant sectors: Cities, Buildings, and Transport; Energy; Health; Tourism; Agricultural and Pasture Systems; Marine Ecosystems and Fisheries; Forestry; Terrestrial Ecosystems; Water Resources Management; Disaster Management and Insurance
- INFRAS 2021: SDC Climate Change Foresight Analysis Report
- ND Gain Index
- INFORM Risk Index
- World Bank Group's Climate Risk Country Profiles
- World Bank's Country Climate and Development Reports (CCDRs)

Step 3. Risks

Based on the previously identified hazards, exposure and vulnerabilities, qualitatively assess the relevant risks in your targeted context.

The aim of this step is to describe the relevant risks as a function of the identified hazards, exposure and vulnerabilities. Qualitatively assess the magnitude of the risks and make a general assessment of the risk landscape in your context (including interrelated and systemic risks).

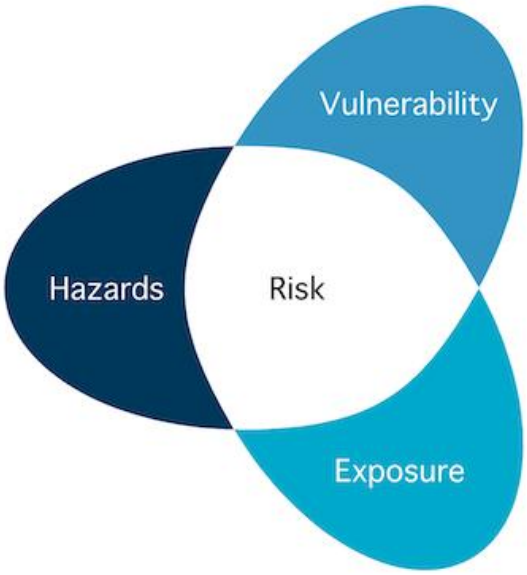
Definition: Risk

According to the IPCC glossary, risk is 'the potential for adverse consequences for human or ecological systems, recognising the diversity of values and objectives associated with such systems. In the context of *climate change*, risks can arise from potential *impacts* of climate change as well as human responses to climate change. Relevant adverse consequences include those on lives, *livelihoods*, health and *well-being*, economic, social and cultural assets and investments, infrastructure, services (including *ecosystem services*), *ecosystems* and species.'
In the context of climate change impacts, risks result from **dynamic interactions between climate-related *hazards* with the *exposure* and *vulnerability*** of the affected human or ecological system to the hazards.

Examples of risks include:

- **Risks to ecosystems** including loss of biodiversity, shifts in habitat ranges, and disruptions to ecosystem services such as pollination and water purification
- **Risks to water resources** including changes in precipitation patterns leading to droughts or floods that affect the availability and quality of freshwater resources
- **Risks to food security** including impacts on crop yields, livestock production, and fisheries due to changing temperatures, water availability, and extreme weather events
- **Risks to health** including heat-related illnesses, increased prevalence of vector-borne diseases such as malaria and dengue, and impacts on mental health due to displacement or stress
- **Risks to infrastructure** including damage from extreme weather events, sea-level rise threatening coastal infrastructure, and disruptions to transportation and energy systems
- **Risks to economies and livelihoods** due to impacts on agriculture, tourism, fisheries, and other sectors heavily dependent on climate-sensitive resources

Figure 6: Function of risk (Source: IPCC AR5 Conceptual Framework)



Find more on the definition of risk in IPCC, 2012: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation.

Step 4. National/local strategies, policies, interventions and actors

Identify national and/or local strategies, policies, interventions and present actors in climate change, DRR and the environment related to your domain or sector of intervention. Summarise the information here. Alternatively, you can upload documents under 'Attachments'.

The aim of this step is to prepare an overview of what strategies, policies and interventions already exist and which actors work on the topics of climate change, DRR and the environment in your domain, sector or geographical area. This may reveal possibilities to find synergies, access services and strengthen coping capacities in a given setting, and may also help identify existing gaps.

Strategies and policies

Compile official policies, strategies, and plans related to climate change, DRR and the environment and regarding your domain or sector both at national and the relevant sub-national level.

Interventions and lessons learned

Describe completed or ongoing interventions by SDC or other actors (donors, implementing organisations, private sector, others) by answering the following questions:

- What are the completed or ongoing interventions in climate change, DRR and the environment with relevance to your areas or domains of concern?
- What do you know about lessons learned regarding good practices or challenges from other development interventions in the relevant field?

Actors

Describe the actors' landscape (donors, implementers, private sector, others) by answering the following questions:

- Who are the major actors in the areas of climate change, DRR and the environment relevant to the present context analysis?
- What are their priorities? How are they funded?
- Is there a potential to join forces or create synergies with existing projects, initiatives or funding mechanisms?

You may map the involved or concerned actors at all levels and extract the key elements relevant for the sector, domain or area of concern, including funding strategies, if applicable.

Data sources and links:

- PreventionWeb: Country and continent DRR profiles and resources
- National Adaptation Plans (NAPs), National Communications to the United Nations Framework Convention on Climate Change (UNFCCC); National Adaptation Programmes of Action (NAPAs)
- National implementation reports of the UNDRR Sendai Framework for Disaster Risk Reduction 2015–2030; National disaster risk management strategies, GFDRR Country Programmes
- National Environmental Action Plan or other links outlined in the 'Recommended links and supporting material'
- Common Country Assessment (CCA) of the United Nations Development Assistance Framework, World Bank Country Assistance Strategies (CAS); World Bank Country Environmental Analysis (CEA)
- Nationally Determined Contributions (NDCs)

On national and sub-national levels, you may find information in:

- National Communications to the United Nations Framework Convention on Climate Change (UNFCCC)

- National implementation reports of the UN ISDR HFA 2005–2015 and Sendai Framework for Disaster Risk Reduction 2015–2030; National disaster risk management strategies, GFDRR Country Programmes
- National Environment Action Plan or other links outlined in the 'Recommended links and supporting material'
- Common Country Assessment (CCA) of the United Nations Development Assistance Framework, World Bank Country Assistance Strategies (CAS); World Bank Country Environmental Analysis (CEA)

Step 5. General assessment

Summarise your general assessment of the context.

Provide your general assessment of the context. You may use this page for:

- Your general understanding of hazards, vulnerabilities, coping capacities, strategies and lessons learned by other actors
- Your understanding of the efficiency of strategies
- Your initial thoughts on possible options to join forces with existing initiatives, or the need for tackling identified gaps
- Other ideas or concerns

This part will **only be shared with the team members**. It will *not* be visible for SDC CDE Focal Point, nor will it be on the CEDRIG website.

Preview, download and share

On this page, you may preview, download and share your context analysis with the CEDRIG community.

This is the last step of the context analysis. You have several options.

If your study includes both an existing and a new context analysis, **please select one of them** to be inserted in your CEDRIG study report. Both studies will be stored and remain available in the application.

- If you have worked with an **existing context analysis**, click on the 'preview analysis & view comments' button to check completeness of the analysis
- If you have created a **new context analysis**, click on the 'preview' button to read through the analysis again and check completeness of the analysis

The following options are available for sharing your completed context analysis with the CEDRIG community.

- **Public**: The context analysis (excluding the general assessment) is publicly available on the CEDRIG website and can be used for new studies by other users. Please note that the author(s) of the context analysis will be visible.
- **Access on demand**: Other users can find the context analysis in the list of existing analyses, and can ask the author to grant access via email. If access is permitted to a specific user, this user can add this analysis (excluding general assessment) to their study. Please note that the author(s) of the context analysis will be visible.
- **Private**: The context analysis is not available to other users, except for the SDC CDE focal point (for learning purposes).

If additional context information is needed, you may seek **external expertise**. For inspiration, check the proposed ToRs given in the Introduction chapter of the Context analysis (access for CDE Network Members only).

Part II: Project analysis

Introduction

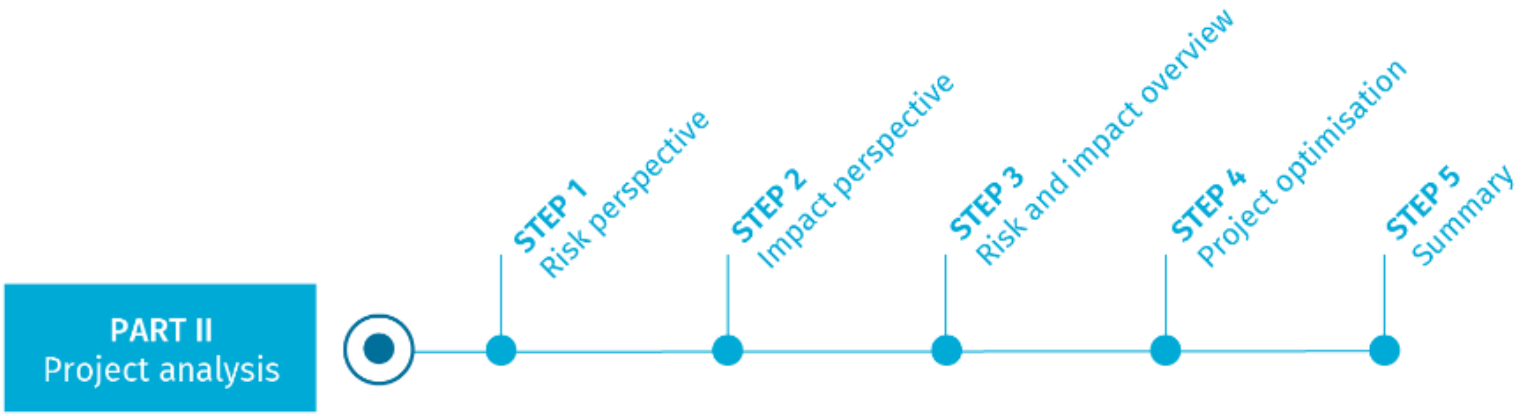
The project analysis builds on the information gathered in the context analysis, and examines the interaction of climate change, disaster risk and environmental degradation in your project. The approach considers risk, impact and project optimisation with the following aims.

- **Risk perspective (on the project):** To identify risks for the project or project activities due to hazardous events, environmental issues and climate change
- **Impact perspective (on climate, Disaster Risk, the Environment):** To identify potential adverse impacts of project activities on climate, the environment or other hazards
- **Project optimisation:** To define measures to avoid risk and adverse impacts, and to look for entry points to generate synergies and co-benefits

Please note that Part II, the project analysis, can only be done if a (draft) project document exists.

The project analysis is ideally conducted as a **multi-stakeholder workshop**, involving key staff and implementing partners. An external facilitator familiar with the CEDRIG tool is recommended. The workshop should be conducted as early as possible in the project preparation stage, or at the mid-term review.

Figure 7: Overview of Part II: Project analysis



Step 1. Risk perspective

Current hazard situation

Describe the current hazard situation in your project context, including an estimate of the hazard characteristics and likelihood.

The **risk perspective** step entails collecting information on the current hazard situation, the exposure and vulnerability, and the relevant risks for the project area. Start by describing the current hazard situation.

- Select and assess relevant **hazards** which affect your project area.
- **Select** the natural and/or environmental hazard(s) relevant for your project activity in the drop-down menu.
- For each selected hazard, describe the known or expected hazard **characteristics** – their intensity and extent.
- On the basis of trends and projections, select the **likelihood** (the probability of occurrence) of the hazard – 'unlikely' for once in a lifetime (80-100 years), 'likely' for once in a generation, (20-30 years), or 'very likely' for every few years (less than 10 years). In cases of gradual degradation, such as soil pollution, deforestation or desertification, likelihood refers to the extent of the phenomenon – limited extent (unlikely), moderate extent (likely), or large extent (very likely).
- If **major hazards** identified and recorded in **Part I: Context analysis** have relevant consequences for the project area (direct or cascading consequences through damage to critical infrastructure, e.g.), list them here as well. Use the **hazard characteristics** field to describe **interrelated hazards**.

Work your way through *Step 1: Risk perspective* by **working hazard by hazard**. Select an initial hazard that you define under *Current hazard situation* and determine the exposure and vulnerability for this particular hazard as well as the relevant risks for the project that arise from it. Repeat this procedure until you have covered all the relevant hazards.

Definition: Hazard

The United Nations Office for Disaster Risk Reduction defines **hazard** as "A process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage, social and economic disruption or environmental degradation." This analysis focuses on environmental and natural hazards and on the effects of climate change.

Examples of hazards include:

- **Natural hazards:** heatwaves, extreme cold, heavy snowfall, hail storms, drought, storms/tornados/hurricanes/strong winds/sandstorms, volcanic eruptions, earthquakes, tsunamis, mudslides/landslides, rock-/snow-/ice-avalanches, (flash) floods, debris flows, and wildfires
- **Environmental hazards**: desertification, deforestation, degradation (land, soil, ecosystems, biodiversity), soil pollution, salinisation, water pollution (surface and subterranean), air pollution, pests and epidemics, and chemical hazards (pesticides, chemicals)

Note that hazards can occur as sudden events or as slow onset events developing over time.

Exposure and vulnerability

Assess the exposure and vulnerability of the project to the identified hazards.

Identify and describe project activities, objectives, goals or priorities that could be affected by the hazards by assessing the exposure and vulnerability of these project components. **Consider that the same hazard can affect more than one component of the project.**

- **Project component**: List individual components – project activities, objectives, and outcomes – that might be affected by the selected hazard. You can either define a new project component or select a project component that has been previously introduced to the CEDRIG tool (**+Add existing project component**).
- **Potential consequences:** Describe how each project components might be affected by the selected hazard.
- **Exposure and vulnerability**: Describe how the project components might be exposed to identified hazards and qualitatively describe the relevant vulnerabilities of your project component to the selected hazard.
- Assign a **category** to each vulnerability as low, medium or high according to the following definitions. *Low* covers short restrictions and minor consequences with no impact on achieving project goals. *Medium* covers restrictions and consequences with impacts on achieving project goals if no mitigating measures are taken. *High* covers critical restrictions and consequences where project objectives can only be achieved if measures are taken.
- Describe if and how **climate change trends** are likely to impact the described risks in the future.

The table on this page is **hazard-specific**. Use the drop-down menu to switch hazard processes, but only if you have defined multiple hazards under '*Current hazard situation'*.

Definitions:

UNDRR defines **exposure** as "the situation of people, infrastructure, housing, production capacities and other tangible human assets located in hazard-prone areas."

In this analysis, it is also important to recognise whether **critical infrastructure** is affected, which can lead to a much greater (spatial) impact of an event than the actual extent of the hazard event. Critical infrastructure typically includes **energy, finances, information & communication, public administration, public health, public safety, transport, food, water and waste disposal**.

Examples of exposure include the following:

- Coastal populations exposed to rising sea levels and storm surges, or communities in drought-prone areas facing water shortages.
- High exposure (and vulnerability) of power plants or power lines towards earthquakes, floods and storms may cause serious large-scale restrictions on power supply for the region.
- Critical road sections (e.g. bridges) exposed to earthquakes, flooding or landslides may lead to accessibility problems of remote villages.

Vulnerability is defined by physical, social, economic and environmental factors or processes that increase the **susceptibility of an individual, a community, assets or systems to the impacts of hazards**. Vulnerability determines how susceptible a community or system is to the damaging effects of a hazard. The lower the vulnerability, the higher the resilience, meaning that the ability of a system to prevent, respond to, or recover from a hazardous event is greater.

Although vulnerability typically depends on the type and location of a hazardous event, certain elements, such as poverty and the absence of social networks or support systems, can generally exacerbate or influence vulnerability.

CEDRIG suggests describing vulnerability by its physical, social, economic and environmental factors:

- **Physical factors** include poor design and construction of the built environment; unregulated land-use planning; limited official recognition of risks and preparedness measures; infrastructure vulnerabilities (homes, shelter; transportation infrastructure: roads, railways, ports); water and sanitation infrastructure; health infrastructure; power generation and transmission infrastructure; schools, information and communication technology; manufactured goods, tools, and equipment
- **Social factors** include the susceptibility of a group or individual to harm or discrimination due to their identity, status, or relationships; poverty and inequality; poor social resources, lack of access to services (such as access to early warning, social services, education, healthcare), including lack of informal networks or social safety nets, lack of access to information, poor knowledge of risk; poor health; pressure to live in unsafe locations due to economic conditions; lack of public information and awareness
- **Economic factors** include lack of (access to) resources and means to withstand or recover from disasters because of limited financial resources, credit, or insurance opportunities; an uninsured informal sector; vulnerable livelihoods or low income from employment, trade or remittances; the inability of an economy to withstand or recover from shocks related to dependence on single industries or sectors or the globalisation of business and supply chains; lack of official policies and strategies for risk finance
- **Environmental factors** include poor environmental management and overexploitation of natural resources; a decline in risk-regulating ecosystem services; and maladaptation to hazards and climate change.

Positive factors that increase the ability of people and systems to cope with hazards are defined by the **Coping Capacity** (UNDRR link).

Further data sources and links

- IPCC AR6: Fact Sheets for relevant sectors: Cities, Buildings, and Transport; Energy; Health; Tourism; Agricultural and Pasture Systems; Marine Ecosystems and Fisheries; Forestry; Terrestrial Ecosystems; Water Resources Management; Disaster Management and Insurance
- INFRAS 2021: SDC Climate Change Foresight Analysis Report
- ND Gain Index
- INFORM Risk Index
- World Bank Group Climate Risk Country Profiles
- World Bank Country Climate and Development Reports (CCDRs)

Social or Structural Vulnerabilities may provide a deeper analysis on vulnerabilities:

- Social Vulnerabilities: Sing, S., Eghdami, M. and Singh, S. (2014): The Concept of Social Vulnerability: A Review from Disasters Perspectives, visited in July 2024 (link)
- Structural Vulnerabilities: United Nations (2024): High level panel on the development of a Multidimensional Vulnerability Index – Final Report, visited in July 2024 (link)

Step 2. Impact perspective

Assess whether your project may have a negative impact on climate change, disaster risk or the environment, and whether it may create or exacerbate risks.

The impact perspective aims at determining whether activities or components of the project may have an adverse effect on climate change, disaster risk, or the environment. While the CEDRIG approach is not as comprehensive as a full-fledged Environmental Impact Assessment, it nevertheless helps to raise awareness and identify unintended negative impacts on climate, disaster risk or the environment.

- **Project component:** Identify any project component that can have a negative impact on the climate, disaster risk or the environment and that could create or exacerbate risks. A project component can be an individual activity of your project, a thematic area of your project, or a strategic aspect of your project, such as the choice of location or the timing of implementation.
  - Negative impacts on climate change can be caused by activities that require fossil fuel or medical items, or support agricultural productivity
  - Negative impacts on disaster risk are increased by an unintended increase in vulnerability or exposure, and by maladaptation that increases risks such as surface run-off, which in turn causes flooding of a land management project
  - Examples of negative impacts on the environment or ecosystems include pollution, agricultural exploitation, and the use of packaging materials

Discuss whether components of your project can lead to **maladaptation** – actions that unintentionally exacerbate vulnerabilities, or create adverse outcomes related to climate change or the environment.

- **Potential negative impact:** Select one or more **impact type(s)** (climate change, environment, disaster risk).
- Describe the potential negative impact in the field '**Impact description'**.
- Estimate the **significance** of the identified impact.
  - The two key characteristics of negative impacts that should be considered in determining significance are **magnitude** and **importance**. Magnitude assesses quantifiable factors such as the size or the extent of an impact – the area of flooded forest by a dam impoundment, for example. Importance relates to the subjective degree of disturbance according to the sensitivity or vulnerability of the system. Other factors, such as the duration of the impact, its frequency, probability, or degree of reversibility, can help in estimating the overall significance of the adverse impact.

- Information on possible adverse impacts can be found in the **Thematic Information Briefs**
- Clicking on the button '**Risk and Impact overview**', opens an overview of the recorded hazards and risks, and the potential impacts

Step 3. Risk and impact overview

This risk and impact overview provides you with an overview of all risks and impacts identified and assessed in **Part II: Project analysis**.

- By clicking on individual cells, you are re-directed to the step of the analysis, and you are able to adjust, or add, information
- You may print the table by using the mouse right button to open in a new tab and print, or by using your browser's print tools

Step 4. Project optimisations

Identify potential project optimisations

Identify project optimisations in order to minimise risks and negative impacts, and to add value to your project by seeking opportunities to have a positive impact and generate synergies and co-benefits with other initiatives. The identification of measures should be based on **Part I: Context analysis,** on Steps 1-3 in **Part II: Project analysis,** and on the **Thematic Integration Briefs**, which provide sector-specific recommendations for integrating C/D/E and specific domains and sectors.

This step aims at identifying measures to optimise your project, and is based on the work conducted in the previous steps in Part I and Part II, and on the Thematic Integration Briefs. It includes the following:

1) Addressing and **minimising the risks** that climate change, disaster risk and environmental degradation pose to your project
2) Addressing and **minimising the negative impact** that your project might have on climate change, disaster risk and the environment
3) Adding value to your project by capturing entry points for **the creation of positive impacts on C/D/E**, and by creating and making use of **synergies and co-benefits** with existing initiatives, projects and actors

At the top of the page are two lists – on the left are all identified risks, and on the right are all potential negative impacts. These lists show which risks and potential negative impacts have not yet been addressed by any project optimisation, and serve as a starting point for the identification of project optimisations. The risk and impact overview can be **printed** using the print function.

The identification of measures should be based on **Part I: Context analysis,** on Steps 1-3 in **Part II: Project analysis,** and on the **Thematic Integration Briefs**, which provide sector-specific recommendations for integrating C/D/E and specific domains and sectors.

For each optimisation, describe the risk or impact addressed or the opportunity taken through the measure. Feel free to draft measures regardless of their immediate feasibility. The following guidance lays out a process for scoring and prioritising the measures according to their feasibility.

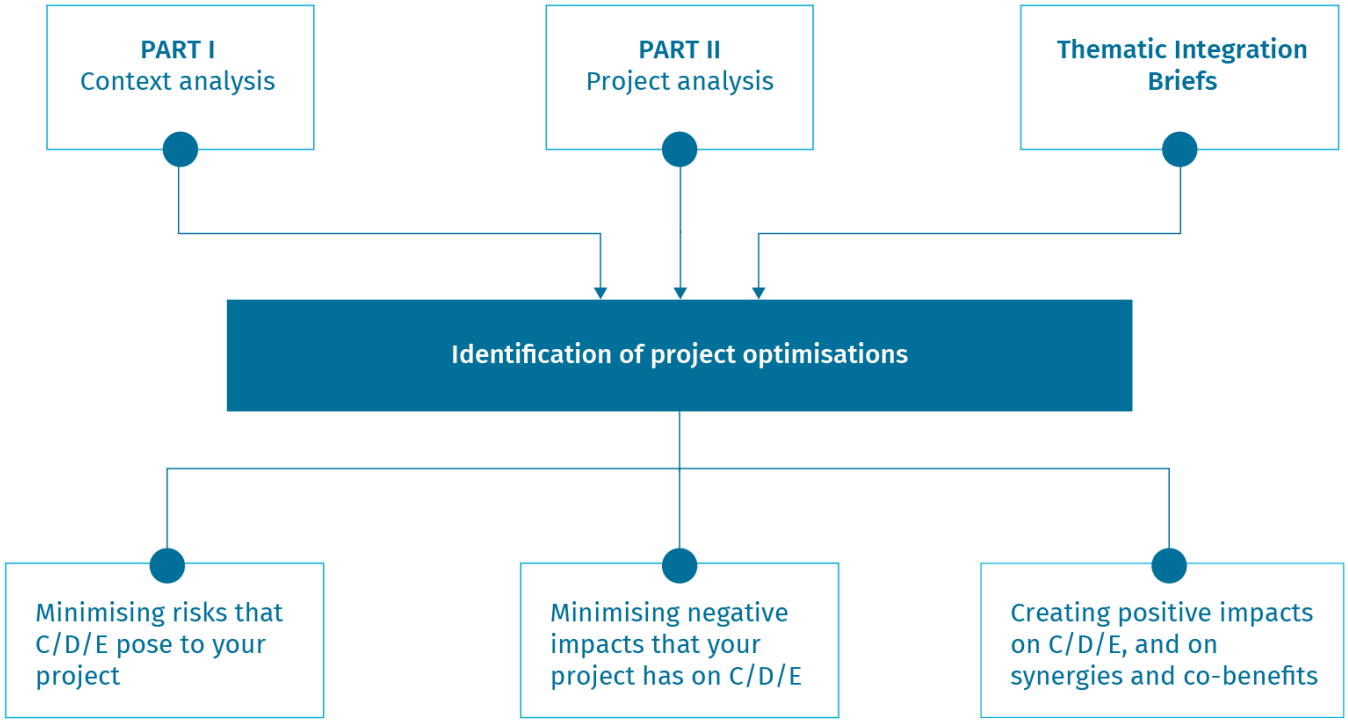
- **Project optimisation title:** Add a title to your project optimisation.
- **Description:** Describe your project optimisation.
- **Addressed risks:** Select the risks addressed through the measure by clicking on the respective button.
- **Remarks (risks):** Describe the risks addressed through the measure.
- **Addressed impacts:** Select the impacts addressed through the measure by clicking on the button.
- **Remarks (impacts):** Describe the impacts addressed through the measure.
- **Opportunity taken:** Briefly describe whether the selected optimisation is based on the context analysis, a Thematic Integration Brief or another source.

Illustrative examples of optimisations are the following:

- **Renewable energy integration**: Incorporating renewable energy sources like solar, wind, or hydroelectric power into development projects helps reduce greenhouse gas emissions compared to traditional fossil fuels.
- **Sustainable agriculture practices**: Promoting sustainable agriculture techniques such as agroforestry, organic farming, and efficient irrigation systems can mitigate climate change impacts.

- Improve **water management** by using drought-resistant crops in areas that are affected by drought.
- Focus on **climate-resilient infrastructure** to ensure built environment is not destroyed by potential hazards.
- Sector-specific examples of measures can be found in the **Thematic Integration Briefs.**

Figure 8: Overview of inputs and results of project optimisations



Scoring and selection of project optimisations

In this step, the previously identified project optimisations can be scored (optional) and selected. Assign a score from 1-4 for each of the criteria.

After having brainstormed different project optimisations to minimise risks and negative impacts and to create co-benefits and synergies, you should now select the most appropriate measures. The optional scoring process supports this selection process, with five pre-defined criteria – effectiveness, cost/benefit ratio, feasibility, acceptability, and sustainability.

Use the scoring process as the basis for a discussion with all stakeholders on the potentially feasible measures, and a discussion of how to adapt the project. The assessment of options requires close involvement of all project partners, as they have to decide whether or not to include newly identified options in the project.

Scoring options

- **Scoring**: Assign a score from 1 (= low) to 4 (= high) for each of the criteria, and for each of the identified measures.
- **Add a custom scoring criterion**: You may add one custom scoring criterion
- **Upload custom scoring**: Should you wish to work with your own scoring, you may upload your own, finalised, custom scoring that will be added in the Attachments in the Overview part of your study
- **Skip scoring**: You may skip the scoring exercise, and decide which project optimisations to implement in a consultative process
- **Remarks**: Add comments about a measure and its scoring
- **Confirm scoring**: Click on this field in order to **select** the project optimisations to be tackled
- **Selected**: Tick the box if you would like to select the measure for implementation.
- **Selection remarks:** Add remarks on why you have or have not selected a certain measure for implementation.

Note that by default, each criterion has the same weight as the others, so if you have four criteria, each one will be automatically weighted as 25% of the total. For five criteria, the weight will be 20% for each.

Scoring criteria

The scoring criteria are set by default; you can add one custom criterion by using the 'Add a custom scoring criterion' button. The assessment for each criterion is explained here, but can be an estimate rather than a firm figure.

1. Effectiveness in enhancing resilience. The extent to which the measure reduces vulnerability, enhances resilience of systems and provides other benefits determines its effectiveness. You might also think of 'no regret' or 'low regret' options: 'Low regret' options would be justified under current climate conditions and under all plausible future scenarios. 'No regret' adaptation options are beneficial and cost effective in cases where no climate change or environmental degradation occurs, and are therefore favoured. Try to answer the following questions:

- Is the option reducing vulnerability and enhancing resilience?
- Is the option providing co-benefits for other sectors?
- Can the option be adjusted in response to changing conditions?
- Is the option a no- or low-regret option?

- How big is the group of beneficiaries? (Note: Options that provide small benefits to large numbers of people will often be favoured over those that provide larger benefits to fewer people.)
- Is the option targeting the most vulnerable communities and people?

2. Cost/benefit ratio. Estimate whether a measure is relatively expensive or inexpensive. Include investment costs as well as costs over time such as operation and maintenance costs, or reconstruction costs. Please note that costs always have to be seen in the context of benefits. High costs can be justified by the high effect they have on enhancing resilience, meaning that low costs do not immediately mean superiority of the measure over a higher cost option. Try to answer the following questions:

- Is the option relatively expensive or inexpensive compared to other options ("cost-efficient")?
- How high are the initial costs of implementation?
- What are the costs over time (operation and maintenance, administration and staffing, etc.)?
- What is the potentially reduced loss (the benefit)?
- How high are the external costs of the option? (Note: External costs are costs not borne by those who create them. Take into account non-economic costs and economic and/or other quantifiable costs.)

3. Feasibility. This criterion addresses how feasible the implementation of the options might be, and considers whether the necessary human, legal, administrative, financial, technical and other resources are available. Options that can be implemented under the current operational framework will normally be favoured over adaptation options that require new authority, new technology, changes in peoples' preferences or other significant changes. Try to answer the following questions:

- What human, legal, administrative, financial and technical resources are required?
- What are the needs for adjusting other policies to accommodate the adaptation option?

4. Acceptability. Assess whether general public acceptance or willingness is present for this measure. Try to answer the following question:

- How acceptable socially and culturally is the option to local stakeholders?

5. Sustainability. This criterion addresses how sustainable the measure would be. Not only in terms of social, economic and ecological sustainability, but also in terms of whether the option is viable without financial support from development cooperation. Try to answer the following questions:

- How sustainable is the option with regard to social, economic and environmental aspects?
- How sustainable is the option in the longer term without financial support from external development cooperation?

Assigning Policy Markers

If you identify and address climate-related risks or environmental impacts as part of your CEDRIG assessment, and if these measures are clearly integrated into the project design and reflected in the credit proposal, the intervention may qualify for one or several of the following policy markers:

- PM Climate Change Mitigation
- PM Climate Change Adaptation
- PM Biodiversity
- PM Desertification
- PM DRR

However, assigning a policy marker is not automatic. It should be based on the relevance and materiality of the measures within the overall project. Further guidance on when an activity can be considered relevant and whether the contribution is substantial enough to justify a marker can be found in the working aid.

Step 5. Summary

Summarise the main conclusions and recommendations from the study.

This text field is used to summarise the main conclusions of your study and the recommendations drawn from the results. Make sure that all relevant risks and impacts are described and addressed. Reflect on adjustments needed and synergies that will be used in the future.

In your summary you may decide to:

- Highlight the main risks your project is exposed to and reflect on the possible measures for your project
- Describe the main potential negative impacts and reflect on possible measures for your project
- Describe any additional expertise needed to define the measures to be implemented
- Select the most appropriate measure to address these risks and impacts, based on the scoring or other reflections
- Identify any measures that cannot be implemented in the current stage, and the reasons for this
- Discuss ideas for potential cross-fertilisation with other projects, or recommendations for integrating climate, DRR and environmental issues into your portfolio, including any opportunities to add value or foster co-benefits

You may also upload your adjusted project document.

Finalisation of CEDRIG Operational

For a final check, you can preview and download the report of your entire CEDRIG Operational study as a Microsoft Word or PDF document.

The following options are available for sharing your completed CEDRIG Operational study with the CEDRIG Community:

- **Public**: *Part II: Project analysis* will be publicly available on the CEDRIG website, and if *Part I: Context analysis* has been set to 'public', the entire report (excluding internal Key Findings of Part I) will be publicly available as one report.
- **Access on demand**: Other users can ask the study owners for access to Part I (excluding key findings) if Part I has been selected as 'access on demand', and can request Part II via email.
- **Private**: The study cannot be read online except by members of the CEDRIG study and for the SDC CDE focal point (for learning purposes).
- **Share with CEDRIG focal point:** The CDE focal point is the person responsible for the CEDRIG tool at SDC. The focal point has access (by default) to the study, and may use it for learning purposes (excluding the key findings of the context analysis, and excluding the 'private' attachments). If you do not agree that the SDC CDE focal point can see the study, then tick the box 'Do not share'.
- **Private Documents:** Documents uploaded in the Overview chapter as private attachments are visible to the authors, editors, and guests, but not to outsiders, nor to the CDE focal point.