Εικόνα που περιέχει κείμενο, στιγμιότυπο οθόνης, γραμματοσειρά, Μπελ ηλεκτρίκ

Περιγραφή που δημιουργήθηκε αυτόματα

Climate Endurance Validation Report

Cross-border Cooperation Programme

Interreg (VI-A) IPA CBC

“Greece - North Macedonia 2021-2027”

The 'Climate Endurance Validation Report' for LB/B should be submitted by partners with that implement investments on infrastructure with expected lifecycle at least 5 years.

The Programme is co-funded by European Union and National Funds of the participating countries

Table of Contents

[1. Introduction 3](#_Toc144296225)

[1.1 Project Description 3](#_Toc144296226)

[1.2 Project Location 3](#_Toc144296227)

[1.3 Summary of the approach to addressing climate change issues 3](#_Toc144296228)

[2. Climate Change Mitigation 4](#_Toc144296229)

[2.1 Preliminary Check 4](#_Toc144296230)

[2.2 Detailed Analysis 4](#_Toc144296231)

[3. Climate Change Adaptation 6](#_Toc144296232)

[3.1 Preliminary Check 6](#_Toc144296233)

[3.2 Detailed Analysis 6](#_Toc144296234)

[4. Bibliography 8](#_Toc144296235)

# Introduction

## 1.1 Project Description

The description of the Project may originate from the Environmental Study or other technical documents. The environmental classification of the Project (if applicable) and the budget should be mentioned.

## 1.2 Project Location

The location of the Project is depicted on maps in the Environmental study or other technical documents.

## 1.3 Summary of the approach to addressing climate change issues

The summary should include the key points from chapters 2 and 3 described below, indicating whether a detailed analysis of climate change mitigation and adaptation was required based on the preliminary examination. If such an analysis was required, the main conclusions should be provided.

In this paragraph, at a minimum, the summarized results of greenhouse gas emissions from the Project should be given if calculated with a detailed analysis. Additionally, the results of the adaptation pre-examination and risk analysis should be included.

Furthermore, the compatibility of the Project with climate neutrality and its consistency with existing climate change adaptation strategies and plans should be mentioned.

# Climate Change Mitigation

In this section, the climate change mitigation is analyzed, which refers to the reduction of greenhouse gas emissions and the infrastructure's contribution to achieving climate neutrality, in accordance with both National and European law.

The overall process includes two phases of examination. The first phase is the preliminary Check, which may determine the need for a detailed analysis (second phase).

## 2.1 Preliminary Check

During the preliminary Check, the Project is assessed to determine whether it falls under the categories exempted from calculating the carbon footprint. If the Project falls under the exemptions, the assessment stops at the preliminary examination phase.

In contrast, if a detailed calculation of the carbon footprint is required, then Section 2.2 Detailed Analysis of this report is completed.

Specifically, the preliminary check should determine whether the Project is expected to have greenhouse gas emissions exceeding 20,000 tnCO2eq during a typical operational year.

If it is clear that the Project does not exceed the mentioned threshold, no assessment for climate change mitigation is required, and the referred in Section 3 Climate change Adaptation are followed.

In cases where it is not clear whether the Project exceeds the above limit, a basic calculation should be carried out based on the available data from relevant studies. Specifically, the following should be calculated:

* The direct greenhouse gas emissions of the Project from the reported typical consumption of fossil fuels and any processes that produce greenhouse gases (e.g., carbonates decomposition, organic material degradation).
* The indirect greenhouse gas emissions from the consumption of electricity and heat that will be imported to the Project. For the calculation of indirect emissions, the most recent emission factor of each country's residual energy mix can be used.

If the estimated emissions from the Project in a typical operational year do not exceed 20.000 tnCO2eq, then the next paragraph does not need to be completed.

## 2.2 Detailed Analysis

In case a detailed analysis of the carbon footprint of the Project is required, the following steps should be taken:

* Internationally accepted standards for emissions monitoring and calculation of greenhouse gas emissions of the Project should be chosen.
* The most reliable data sources for calculating greenhouse gas emissions should be selected.

2.2.1 Carbon Footprint of the Project

In this paragraph, a detailed description of the data sources, standards used, and the results of estimated emissions for the following emissions of the Project should be provided:

* Field 1: **Direct greenhouse gas emissions** resulting from sources used within the Project during its operational phase and are directly controlled by the Organization who owns the Project.
* Field 2: **Indirect greenhouse gas emissions** resulting from the production of energy (electricity and heat) imported from external providers and consumed within Project during its operational phase.
* Field 3: **Other indirect greenhouse gas emissions** related to the operation of the Project but generated from sources not under the control of the Organization who owns the Project.

2.2.2 Project relates emissions

The greenhouse gas emissions calculated for a typical operational year (absolute emission number) should then be used to determine the corresponding emissions as follows:

* The relative emissions are the difference between the absolute emissions and the baseline emissions.
* The baseline emissions are the emissions that would result from an estimated baseline scenario that would occur in the absence of the Project for a typical operational year.

If the emissions are positive (i.e., the Project emits more greenhouse gases than the baseline scenario), then an economic assessment of the emissions should be conducted. In contrast, if the emissions are negative (i.e., the Project reduces greenhouse gas emissions compared to the baseline scenario), an economic assessment is not required.

2.2.3 Compatibility with carbon neutrality target

The goal of the detailed analysis is to verify whether the Project contributes to achieving climate neutrality, as defined by the National and European legislation, or not.

# Climate Change Adaptation

In this section, the project's endurance to climate change is justified, which means its ability to cope with and adapt to anticipated climate risks.

The justification takes place in two stages. The first stage is the preliminary check, which may lead to the need for a detailed analysis (second stage).

## 3.1 Preliminary Check

An evaluation of the project's vulnerability is carried out by combining:

* The project's sensitivity to climate risks and
* The exposure of the infrastructure due to its geographical location to these risks, i.e., whether these climate hazards are expected to occur in the infrastructure's location in the near and distant future based on climate predictions.

Specifically, concerning the project area, the exposure to risks should be examined, taking into account local characteristics. Relevant information can be obtained from plans and strategies that have been developed for the geographical region of the project. An indicative list of such plans includes:

* National or Regional Plans for Climate Change Adaptation
* Flood Risk Management Plans
* Spatial planning and sustainable development frameworks at the regional and economic sector levels (where applicable)
* National or Regional Forest Strategy

The climate risks that should be considered are those relevant to the project.

The vulnerability analysis should be carried out for both the current climate conditions and the projected future conditions.

The Preliminary Check phase determines whether a Detailed Analysis will be required. In general, a Detailed Analysis is necessary in cases where at least one climate hazard has been identified for which the project's vulnerability level is estimated to be moderate or high.

## 3.2 Detailed Analysis

The Detailed Analysis consists of:

* Rrisk analysis
* Measures to enhance climate change adaptation

3.2.1 Risk Analysis

The Risk Analysis is conducted for the climate hazards that have been identified as moderate or high through the vulnerability analysis. The Risk Assessment should be presented in a summary table.

3.2.2 Measures to enhance climate change adaptation

If the Risk Analysis identifies climate hazards as moderate to high, information should be provided on how they are addressed through appropriate adaptation measures at an acceptable level.

3.2.3 Consistency with adaptiation strategies and plans

The objective is to assess whether the Project contributes to the broader effort of climate change adaptation at the European, National, and Regional levels.

The alignment of the Project with the strategies and adaptation plans can be examined based, for example, on approved National/Regional Climate Change Adaptation Plans.

# Bibliography

The data bases used for calculating greenhouse gas emissions of the Project and for assessing the Project's adaptation to climate change, especially regarding the identification and quantification of risks arising from climate change, should be provided.

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| The Legal Representative of the Beneficiary  Stamp/ Signature |