ITALIAN AGENCY FOR DEVELOPMENT COOPERATION

ENVIRONMENTAL MAINSTREAMING AND DEVELOPMENT COOPERATION

GUIDANCE TO ENVIRONMENT AND CLIMATE CHANGE SCREENING, ENVIRONMENTAL IMPACT ASSESSMENT (EIA), STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA) AND CLIMATE RISK ASSESSMENT (CRA)

2023

ITALIAN AGENCY FOR DEVELOPMENT COOPERATION

CONTENTS

The Italian Development Cooperation Agency (AICS) pursues the objective of strengthening environmental sustainability in all development cooperation initiatives.

To this end, AICS has teamed up with Sogesid S.p.A. to produce an operational manual called *Environmental Mainstreaming and Development Cooperation. Guidance to Environment and Climate Change Screening, Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA) and Climate Risk Assessment (CRA)*, a useful document for taking into account, from the earliest planning and design stages of development cooperation initiatives, the potential environmental and climate risks and impacts in the countries in which the Agency operates.

AICS, by accepting the global challenge of environmental sustainability, is therefore committed to promoting, within its organisation, the "transition" towards strengthening the environment and responding to climate change throughout the life cycle of a cooperation initiative, in order to balance environmental, economic and social objectives, to contribute to an effectively sustainable development. These issues are tackled across international development cooperation actions, as expressly indicated by the Organisation for Economic Cooperation and Development (OECD, 2014).

Clearly, the environment needs to be protected by rethinking regional development as a whole, as a common good, including the care of its natural components with a view to achieving sustainable human development.

The manual, which we are presenting here, guides the actors of Italian Development Cooperation in the choice of the various environmental impact analysis tools, at different levels of detail, as may be required from time to time. Based on the needs of territorial planning, it includes environmental and climate screening, strategic environmental assessment and environmental impact assessment, as well as climate risk assessment.

In particular, this handbook also provides the basis for guiding subsequent actions, which will ensure that the initiative is designed and implemented taking into account possible climate-related impacts and adaptation needs and options, following the approach of effective cooperation and result-based management (Result-Based Management - or chain of results).

Deputy Director, AICS

Leonardo Carmenati

INTRODUCTION

Generally speaking, environmental sustainability is integrated into international development cooperation through iterative processes aimed at protecting and preserving the environment, in particular when defining policies, allocating resources and implementing and monitoring actions at national, sectoral and local levels.

The focus, in this case, is on the environment and its impacts on the socio-political conditions of the beneficiary country, by means of a comprehensive analysis of the relevant context, leading to a roadmap for conducting the environmental survey, which then takes shape during the successive steps for identifying, formulating, implementing and assessing an initiative.

To this end, the Italian Agency for Development Cooperation (hereafter referred to as AICS) should adopt an environmental mainstreaming approach within (and across) its entire project management process, as a stand-alone exercise, with specific tools and techniques.

The environment and climate change, in fact, are increasingly seen as important strategic issues for development cooperation actions, which require a cross-sector approach affecting both the key sectors of Italian development cooperation and other non-priority areas which are, nonetheless, important for designing long-term strategies.

This means that we need to consider all the areas in which mainstreaming can help improve environmental impacts for the recipient countries of development cooperation, to increase the resilience of communities towards the effects of climate change and contribute to sustainable development with low carbon emissions.

The first step in this new approach is to ensure that each new AICS action is consistent with the priorities set out in the Country Plans and with the environmental context analysis, or is already part of the dialogue with the partner country, after which it can be formulated.

The following paragraphs contain a detailed overview of the basic tools for effectively analysing how development cooperation actions can affect environmental and climate change, also introducing relevant verification and assessment measures.

The main tools that can be used at an early stage for conducting the above-mentioned detailed analysis are:

- Environment and climate change screening.
- Strategic Environmental Assessment (SEA).
- Environmental Impact Assessment (EIA).
- Climate Risk Assessment (CRA).

All these tools come in handy when the environmental legislation of the partner country is lacking or does not comply with international standards. The role of the relevant operators is precisely to ensure compliance with the applicable procedures.

1 ENVIRONMENT AND CLIMATE CHANGE SCREENING

Environment and climate change-related screening[1] is necessary to conduct a preliminary investigation of the environmental and climate issues, opportunities and risks.

During the action/initiative preparation phase, the environmental and climate change-related screening process is designed to support the **preliminary** assessment of environmental and climate aspects of the initiative, and to determine the steps to be taken during formulation to address those aspects.

In short, screening[2] helps determine whether a specific international development cooperation action is likely to have a significant adverse impact on the environment or faces a significant risk due to climate change. In such a case, a more detailed analysis of its environmental and/or climate change implications may be required in the form of a Strategic Environmental Assessment (SEA), an Environmental Impact Assessment (EIA) and/or a Climate Risk Assessment (CRA).

Importantly, the national and local environmental authorities of the partner countries should always be involved and made aware of the planned action to prompt their support during the screening process, according to the applicable national regulations and procedures, for the identification of key aspects that need to be addressed during the preliminary phase of environmental analysis.

The screening may lead to any of the following three scenarios:

- specific Strategic Environmental Assessment (SEA), Environmental Impact Assessment (EIA) and/or Climate Risk Assessment (CRA) studies;

[1]See Guidelines 6, Integrating the Environment and Climate Change into EU International Cooperation and Development, Annex 3, "Environment and Climate Change Assessment".

[2]According to the Italian environmental legislation (Legislative Decree 152 of 2006), screening corresponds to the so-called "verification of applicability" to a project to an EIA, the purpose of which is precisely that of assessing whether a project (work) can cause specific significant and adverse environmental impacts that necessarily require the further application of an EIA procedure.

- no further studies but an assessment of specific key aspects during the action formulation phase;
- no further assessment.

After environmental screening, the first step is to determine the relevant tool (SEA, EIA or CRA) based on the type of action (programme or project).

SEA screening is the appropriate tool for the environmental integration of preliminary plans and programmes. This form of screening is used to identify the need and relevance of a detailed assessment of the environmental impacts on government policies, plans or programmes in the sector (*strategic document*), in order to enhance the environmental performance of the strategy and the implementing programme.

EIA and CRA screenings apply to projects.

Please, refer to section 3.2 for the EIA screening checklist.

2 STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA)

A **Strategic Environmental Assessment (SEA)** is a process designed to ensure that the formulation and approval of **a plan or programme** adequately take into account the significant impacts on the environment expected from its implementation (e.g. *National Air Pollution Prevention Programme*). In short, the SEA procedure investigates how the policies, development plans or programmes can affect the environment and provides a tool for assessing their effects. The SEA examines the extent to which a given policy, plan or programme (in terms of its level of strategic options and/or land-use planning guidelines) can provide an adequate response to environmental issues, i.e., whether it may adversely affect the environment and resilience to climate change.

Specifically, the SEA screening assesses the extent to which a given plan or programme:

- can adequately respond to environmental and climate change challenges;
- adversely impacts on the environment and climate resilience;
- integrates environmental improvement opportunities and contributes to climate-resilient and low-carbon development.

Ideally, a SEA should become part of the definition and formulation of an action (plan or programme) from its earliest stages, by identifying, describing and assessing:

- the likely significant effects on the environment arising from the implementation of the cooperation action;
- the most important environmental constraints related to the natural resources and climate change effects affecting performance;
- the opportunities for the SEA-assessed action to help enhance the state of the environment (and the lives of communities), building climate resilience in both the sector and the population, and promoting low carbon development and transition to the green economy.

In development cooperation, SEA screening – particularly in strategic programming and planning in a partner country or any of its strategic sectors – is an important tool for the integration of environmental and climate change-related aspects.

In the case of spatial or theme-based planning and programming, SEA screening should also take the social impact into account, while ***Strategic Environmental and Social[3] Impact Assessment (SESIA)*** should be applied to determine the socio-environmental impacts and envisage the necessary mitigation and/or compensation measures. This is founded on a multi-disciplinary approach that combines assessing the economic aspects of an action – based on a cost/benefit ratio – with the environmental and social consequences associated with its implementation. In particular, it allows environmental and social issues to be systematically integrated with economic issues in the policies, regulations and planning, project development and performance of the relevant operations. It should be emphasised that, technically speaking, SEA is not a procedure, but a tool integrated into the ordinary programming and planning procedures of public authorities. SEA cannot replace EIA. In fact, SEA, by its very nature, does not require an authorisation process, but supports and assists decision-making by public bodies, within a specific regulatory framework and a social, economic and environmental context.

SEA is composed of two parts: a **scoping study** and a **SEA study**.

[3] This assessment refers to the 10 ***Environmental and Social Standards (ESS)*** introduced by the World Bank in 2018: I, *Assessment and Management of Environmental and Social Risks and Impacts; II, Labor and Working Conditions; III, Resource Efficiency and Pollution Prevention and Management; IV, Community Health and Safety; V, Land Acquisition, Restrictions on Land Use and Involuntary Resettlement; VI, Biodiversity Conservation and Sustainable Management of Living Natural Resources; VII, Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities; VIII, Cultural Heritage; IX, Financial Intermediaries; X, Stakeholder Engagement and Information Disclosure.*

2

2.1 SEA SCOPING STUDY

The SEA **scoping study** defines the key issues to be addressed in the SEA study and consists of the following elements.

BOX 1. SEA SCOPING STUDY	
SEA SCOPING STUDY	
1) Overview of the sector strategic document and its policy, institutional and legal framework	Describes the policymaking and/or planning process for the relevant sector of the scoping study, including alternative options. If deemed necessary and reasonably justified, additional options should be suggested for consideration in the SEA study. Where a sector strategic document already exists, its main features should be described. The policy, institutional and legal framework related to the sector should be described. Particular attention should be paid to institutions and entities responsible for environmental and climate change issues relevant to the implementation of the sector strategic document, as well as to the relevant environmental and climate change policy and legislation (including bilateral, regional and international commitments). National environmental and climate change policy objectives relevant to the sector should be identified. The links between the policymaking/planning process (i.e. the preparation of the sector strategic document and/or the support programme) and SEA must be described, i.e. which outputs of the policymaking/planning process should feed into the SEA process and vice versa. The specific policymaking/planning decisions and processes that should be influenced by SEA must be identified.

SEA SCOPING STUDY	
2) Description of key stakeholders, their interests and concerns	The involvement of stakeholders in the SEA process is a key success factor. Key stakeholders should be identified: key groups and institutions, environmental agencies, climate change-related institutions, non-governmental organisations, civil society representatives and others, including, in particular, those groups potentially affected by the likely socio-environmental impacts of implementing the sector strategic document. Particular attention should be paid to involving and building the value of typically less represented groups such as women, indigenous peoples and minority groups. The strategy should provide stakeholders an opportunity to influence decisions. If some of the identified stakeholders are not used to being engaged in similar processes, particularly at the strategic level, and if there are no precedents, it might be important to include a capacity building component in the stakeholder engagement process.
3) Description of key aspects to be addressed in SEA	On the basis of the policy, institutional and legal framework analysis, as well as the consultation of stakeholders, the key social, environmental and climate change aspects that should be addressed in the SEA study should be identified, i.e. the key sector strategy-environment/climate change interactions that need to be given special consideration and emphasis in light of: • the potential significant impacts on the environment, significant contributions to greenhouse gas emissions (in relation to national emissions) and increased climate change vulnerability associated to the implementation of the strategic document; • the key environmental, natural resources and climate change aspects that impinge on sector performance and are not adequately addressed by the strategic document; • key opportunities for the strategic document to make a significant contribution to social and environmental sustainability, climate resilience, low carbon development and the green economy; and • the potential conflicts between the sector strategic document and social, environmental and climate change policy objectives (at national or sub-national level). Depending on the expected impacts on society and the scope of other studies, there is also a need to determine the extent to which social impacts should be assessed[4], notably from the perspective of livelihoods, housing and poverty reduction.

[4]In this case, impacts on human beings should be disaggregated by gender, age or other relevant social criteria

2

SEA SCOPING STUDY	
4) Description of the scope of the environmental baseline such to be prepared in the SEA study	Also on the basis of the information obtained above, indications must be provided of the scope of the environmental baseline required for the SEA study, ensuring that it will be adequate to examine in more detail the key environmental aspects identified above. This will include a proposal on the geographical units that will need to be targeted. All geographical units identified for inclusion in the environmental baseline assessment should be justified.
5) Recommendation on specific impact identification and evaluation methodologies to be used in the SEA study	The study should provide an indication of the impact identification and evaluation methodologies that will be used in the SEA study. Special attention should be given to identifying those environmental interactions that will require quantitative analyses and those for which qualitative analyses should be carried out.
6) Indication of time frames needed to carry out the SEA study	The indication of the time needed for the completion of the SEA study, based on the results of the scoping study.

BOX 2. STANDARD FORMAT FOR THE SEA SCOPING REPORT

STRUCTURE OF THE REPORT

1. Summary
2. Description of the sector strategic document under consideration
3. Overview of the policy, institutional and legal framework
4. Overview of key stakeholders, their interests and concerns (with social study)
5. Description of key environmental aspects to be addressed in the SEA study
6. Description of the scope of the environmental baseline to be prepared for the SEA study
7. Recommendations on specific impact identification and evaluation methodologies to be used in the SEA study
8. Proposal of time frames and resources needed for the SEA study
9. Appendices

A. Stakeholder engagement methodology
B. List of stakeholders engaged or consulted
C. List of documents consulted

2.2 SEA STUDY

The **SEA study** is based on the outcome of the scoping phase (following approval of the scoping study report) and includes an environmental baseline study, the identification of environmental and climate change constraints and opportunities, the identification and assessment of the potential environmental impacts, an analysis of performance indicators, an appreciation of the institutional capacities to address the environmental and climate change challenges identified, and conclusions and recommendations. The **SEA study** is composed of the following elements.

BOX 3. SEA STUDY	
SEA STUDY	
1) Environmental baseline study	A description and appraisal must be made of the current state of the environment, focusing on those key environmental components identified in the scoping study and necessary to better understand the key issues identified. The trends for, and pressures on, the various environmental components must be identified, and a projection made of the state of the environment in the short, medium and long term (as relevant) under the assumption of no implementation of the sector strategic document, taking into account the effects of climate change (to the extent that they can be predicted with some reliability). External factors must also be taken into account, including the possible influence of policies and strategic plans relating to other sectors. The geographical (or mapping) units to be addressed should be described, if relevant.
2) Identification and evaluation of environment-related risks, constraints and opportunities	The environmental and climate change factors that can affect (positively or negatively) the relevance, effectiveness, efficiency and sustainability of the sector strategic document, should be identified, described and assessed. These factors may include the availability of natural resources necessary to achieve the strategy's objectives, as well as the current and projected effects of climate change. This part of the study should consider the environmental issues that can potentially be addressed by the strategic document under assessment. As relevant, the study should assess whether the sector strategic document, in light of the identified vulnerabilities, provides an adequate response or not.

2

SEA STUDY	
3) Identification and evaluation of impacts	The potential environmental consequences of implementing the sector strategic document, including the positive or negative contribution to greenhouse gas emissions (if significant relative to national emission levels), must be identified and described for each alternative being studied; their significance should be determined taking into account the characteristics of impacts[5], the views and concerns of stakeholders and the sensitivity of the environment. The potential cumulative impacts of the envisaged sector activities should be identified, since they may differ from the sum of individual impacts. Those impacts which are significant should be assessed in detail taking into account: • the views and concerns of *stakeholders;* • consistency with international commitments (bilateral and multilateral environmental agreements); • socio-economic consequences (especially on vulnerable groups and ethnic minorities); • compliance with environmental and climate change regulations and standards; • consistency with environmental and climate change objectives and policies; and • their implications for sustainable development. As far as climate change mitigation is concerned, different strategies may lead to different outcomes in terms of greenhouse gas emissions or carbon sequestration. If various alternatives are under consideration and involve significant differences in this regard, these differences should be evaluated in the study.
4) Identification and evaluation of impacts in terms of vulnerability to climate risks	The direct and indirect impacts of implementing the sector strategic document in terms of increased or reduced vulnerability to climate variability and climate change should be considered as relevant (e.g. the construction of new infrastructure in "climate-sensitive" areas such as coastal zones may lead to population migrating to these areas, thus exposing more people to climate risks; on the contrary, sector-wide measures may contribute to increase the population's resilience to climate change).

[5]For example, duration, probability, magnitude, mitigability, reversibility.

SEA STUDY SEA STUDY	
5) Analysis of performance indicators	Performance indicators proposed by the sector strategic document (or already envisaged by AICS for its sector support programme) should also be assessed from an environmental perspective, i.e. with regard to their usefulness to capture the environmental effects (positive or negative) of implementing the sector strategic document and to monitor the environmental and climate-related constraints bearing on it. Based on this analysis, proposals should be made, as appropriate, for the improvement of the existing assessment framework. Proposals should also be made for the EU support programme performance indicators and monitoring system.
6) Appraisal of the capacities to address environmental and climate-related challenges	The capacity of regulatory institutions to address the identified environmental and climate-related issues, both in terms of adaptation and mitigation, should be appraised.
7) Coinvolgimento delle parti interessate	Stakeholders should be engaged throughout the SEA study according to the stakeholder engagement strategy agreed at the scoping phase.
8) Conclusioni e raccomandazioni	This section will summarise the key environmental issues for the sector involved, including policy and institutional constraints, challenges and main recommendations. Recommendations should be made on how to optimise positive socio-environmental impacts and make best use of environment- natural resource- and climate change related opportunities, as well as on how to mitigate adverse effects, adapt to environmental and climate change constraints and manage risks. They should suggest the selection of an alternative (in cases where more than one alternative is envisaged), potential changes in the design of the sector strategic document, implementation and monitoring modalities, or cooperation actions. Recommendations to AICS for the formulation of its sector support programme may outline complementary measures to address specific weaknesses in the environmental and climate change institutional, legal and policy framework. They should also include proposals for indicators. The limitations of SEA and its assumptions should be presented. The recommendations should take into account the views presented by stakeholders and explain how these were integrated. In the case of concerns that were not integrated in the final recommendations, the reasons thereof should be given.

2

BOX 4. STANDARD FORMAT FOR THE SEA STUDY REPORT

STRUCTURE OF THE REPORT

1. Summary
   Part I: Background
2. Scope and objectives
3. Background
   A. Description of the sector strategic document
   B. Alternatives under consideration
   C. Environmental policy, legal and planning framework for SEA
   D. Key issues identified
4. Approach and methodology
   A. General Approach
   B. Geographical or environmental mapping units
   C. Assumptions, uncertainties and risks
5. Environmental and climate change objectives and indicators relevant to the sector
6. General environmental and climate change baseline
   Part II: Analysis of key issues
7. Key Issue 1
   A. Rationale for the selection of the key issue (synthesis)
   B. Baseline (including social, institutional, policy and legal framework specific to the key issue)
   C. Analysis (including, as relevant, a discussion on how the state of the environment and/or climate change affect sector performance, potential significant impacts on the environment and communities associated to sector strategy implementation, significant opportunities for the sector strategy to contribute to environmental su stainability, low carbon development and the green economy: the analysis should take into account aspects such as the appropriateness of the institutional and regulatory framework, institutional capacities, etc.)
   D. Analysis of alternatives
   E. Recommendations
8. Key Issue 2
   A. Rationale for the selection of the key issue (synthesis)
   B. Baseline (including institutional, policy and legal framework specific to the key issue)
   C. Analysis (including, as relevant, a discussion on how the state of the environment and/or climate change affect sector performance, potential significant impacts on the environment and communities associated to sector strategy implementation, significant opportunities for the sector strategy to contribute to environmental su stainability, low carbon development and the green economy: the analysis should take into account aspects such as the appropriateness of the institutional and regulatory framework, institutional capacities, etc.)
   D. Analysis of alternatives
   E. Recommendations
   Part III: Conclusions and Recommendations
9. General conclusions

STRUCTURE OF THE REPORT

10. Recommendations for formulation of the AICS support programme/project
11. Recommendations for enhancement of the sector strategic document
12. Maps and other illustrative information not incorporated into the main report
13. Maps and other illustrative information not incorporated into the main report

3 ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

Environmental Impact Assessment (EIA) is an administrative procedure for the preliminarily identification of **the impact of an action on the environment** (e.g. the construction of a waste treatment plant). EIA identifies, describes and assesses the effects of an action (project or work) on specific environmental factors and human health.

EIA is one of the most important tools for the integrated planning and management of natural resources and projects globally, according to a perspective of environmental protection and sustainable development. EIAs began to be used almost 50 years ago and have since rapidly gained momentum internationally, to the extent that **governments around the world have sought to integrate this tool into their legal frameworks**, so that they are continually updated on the basis of past experience and developments in modern technology.

The implementation of EIAs is crucial for ensuring environmentally sound development and combating climate change, therefore, EIAs are of great importance also for achieving the goals of the 2030 Agenda for Sustainable Development.

Obviously, an EIA is an administrative procedure if there is a reference legislation that can support the competent authorities (government departments, local public entities, research institutions, etc.) in identifying, describing and assessing the environmental impact of a work, typically an infrastructure, whether *green or grey*[6], but not exclusively in the engineering and/or architectural sense.
In development cooperation actions, the EIA approach is mainly aimed at:

- identifying the most suitable option in terms of its environmental impact, among the different project alternatives;
- optimising the project (work) implementation, within a given local context;

[6]Grey infrastructures are construction projects that use concrete and steel, while a green infrastructure is a project that depends on plants and ecosystem-related services but can be totally built and man-made. They are networks of natural and semi-natural areas strategically planned with other environmental elements, designed and managed to provide a broad spectrum of ecosystem-related services.

- minimising any possibly adverse consequences by preventing potential hazards through appropriate environmental and health monitoring activities.

Development cooperation actions can either consist of a single project (the construction of a dam, set-up of an irrigation scheme, reforestation or afforestation plan, etc.) or be composed of several, technically diverse, projects (e.g. building a school and a sewerage system in an urban area). EIA applies to all the engineering design phases, from pre-feasibility, feasibility, design proper, final design, construction drawings[7] to construction and acceptance testing phases).

Internationally, there is a tendency to use ***Environmental and Social Impact Assessment*** **(ESIA)**, a process for predicting and assessing the potential environmental and social impact of a project (work), screening the alternatives and designing appropriate mitigation, management and monitoring measures.

In fact, the importance of the social dimension of actions has increased over time, and new approaches to impact assessment have consequently emerged that require an integrated perspective in which environmental and social issues are equally acknowledged and evaluated.

In this context, **ESIA** appears to be **the most comprehensive tool because it defines the framework of potential environmental and social risks and impacts of an action**, based on an integrated and multifaceted impact assessment.

EIA brings important information as it complies with the principle of environmental information and public participation, **which was introduced in the Italian legislation following the transposition and ratification of the Aarhus Convention** in 2001. Legislative Decree 4 of 2008, in fact, has amended the Environmental Code (Legislative

[7]The terminology introduced here differs from that in use in Italian procurement legislation. The Procurement Code (Legislative Decree 50/2016, Art.23), in fact, provides for three design levels, namely, the Feasibility Project or Study (formerly known as the Preliminary Design), Final Design and the Construction Drawings

3

Decree 152 of 2006) by introducing (in Article 3) the principle of the *Right of access to environmental information and of participation for collaborative purposes*. Moreover, Legislative Decree 195 of 2005 had already envisaged opinions and authorisations downstream of the EIA procedure as well as **Environmental Impact Studies (EIS)**, as a source of environmental information.

EIA must **also take into account the impact of a project on the cultural heritage**. In fact, the multiple expressions of the cultural heritage are an important source of valuable scientific and historical information, as well as representing an economic and social resource for development, and an integral part of people's cultural identity and practices. The reference here is to both the tangible cultural heritage, which includes objects, buildings, sites, structures, groups of structures and natural features and landscapes of archaeological, palaeontological, historical, architectural, religious, aesthetic or other importance, and the intangible cultural heritage, which includes practices, representations, expressions, knowledge and skills that communities and groups recognise as part of their heritage. The cultural heritage must be protected and taken into account throughout the life cycle of a project and, according to the same philosophy, applied to the environmental impact assessment procedure (assessment of impacts during the design, use and decommissioning stages). At present, only a limited range of formal tools for identifying receptors and assessing the impacts on the cultural heritage is available, although UNESCO is spearheading the preparation of a methodology for assessing impacts on the cultural heritage[8]. In fact, Environmental Impact Assessment (EIA) procedures are frequently used where formal assessments are carried out.

At present, the risks and impacts on the cultural heritage (at all project stages, from design to construction) are taken into account as part of the environmental assessment (direct, indirect and cumulative impacts). Based on the nature and extent of environmental and social risks and impacts on the cultural heritage, a Cultural Heritage Management Plan is being drawn up in consultation with the stakeholders. The World Bank, in its new 2018 Environmental and Social Standards (ESS), dedicates a specific standard to the cultural heritage:

> *"ESS8 Cultural Heritage: recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. ESS8 sets out measures designed to protect cultural heritage throughout the project life-cycle".*

[8]See: https://whc.unesco.org/en/activities/907/

3.1 INITIATION PHASE OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

The EIA procedure discussed below is based on established practices and is particularly useful in cases where no provisions are made in the national legislation of the partner country or where the proposed procedure does not meet internationally recognised standards[9].

In this perspective, the purpose of EIA is, therefore, on the one hand, to carry out a prior assessment of the environmental impacts that may be caused by a given action (work) and, on the other hand, to identify the necessary steps that need to be taken to address the possible adverse effects.

In order to be correctly applied, the EIA procedure must follow a series of steps[10].

The first step is a feasibility (or pre-feasibility) study of the (grey and/or green) project. At this stage, there is no need for a detailed final design because an initial description consisting of the following elements is sufficient:

- the geographical, ecological, environmental and social context of the proposed project (work), including any additional infrastructure that may be required for developing the project (e.g. dedicated pipelines, access roads, water supply systems, housing and storage facilities for raw materials and products);
- the graphic location of the project, on a map, for example, showing the project site and area of influence and the sensitive environmental and social characteristics of the area;
- the definition of the design process (e.g. type of technology/ process, design of the structures, construction, operation and maintenance, decommissioning or closure);
- information about any local communities and relevant social issues that require additional assessments or plans.

[9]Where the legislation of the partner country is particularly weak and the development cooperation action is directly managed, the AICS will directly conduct an EIA if its own funds are available. In the event that the operating context is unsuitable or does not meet the conditions to conduct an EIA, an environmental assessment through the screening table can still be used instead of the EIA proper.

[10]The procedural steps described herein may deviate from those regulated in Italian law under Legislative Decree 152 of 2006 as supplemented.

3

3.2 EIA SCREENING PHASE

After completing the feasibility study, the second step is the **screening phase**, aimed at establishing whether the impacts of a project, and its related works, are of **environmental significance** such as to require or not an EIA procedure. The screening phase is, therefore, **an *ex-ante* verification**.[11]

The projects that normally undergo the screening procedure are generally, although not necessarily, (green or grey) infrastructure projects with a monetary value in excess of 300,000 euro[12]. The use of a numerical threshold instead of the different project types (works) responds to the need for a simpler method to distinguish between projects that require the EIA procedure, since the list of possible implementations in the various cooperation sectors can never be exhaustive. However, Box 10, Section 1.4.5, provides a description of the main types of works that can be subject to EIA.

During the screening phase, a specific analysis is carried out to determine the extent to which the legal, dimensional and significance conditions of the environmental impacts are met, requiring an EIA procedure. Infrastructure works that greatly exceed the previously mentioned threshold (e.g. dams) are, almost by default, subject to the EIA procedure.

The screening, formalised in an environmental report (the so-called *Environmental Assessment*), must cover the following aspects:

- the environmental effects of the project, including its cumulative effects, and any possible impacts due to accidents or malfunctions;
- the feasibility of the technical and economic measures that can mitigate or even eliminate any adverse environmental effects;
- the cultural debate surrounding the project, i.e. its social acceptance.

Data must be gathered for the screening phase (including GIS – Geographic Information System data and maps, where available) on the current and past use of the area concerned by the work, current

[11]Under Italian law, the screening phase corresponds to the so-called "verification of subjection to an EIA".

[12]This monetary threshold has been set solely for internal use by AICS, to facilitate the choice between one or more works within a development cooperation action; this threshold, in fact, also takes on a cumulative value and is referred to the PRAG threshold. The threshold of 300,000 euro therefore refers to either a single work, or to several works of similar technical type, which, taken together constitute a single planning act (e.g. a number of lots in a reforestation plan, the construction of several weirs within a catchment basin). The monetary value of each technically similar work is likely to be less than 300,000 euro.

infrastructure, topography, geology, hydrogeology, water resources, waste management, presence of local communities and places of cultural, historical and religious interest, local flora and fauna, and assessment of any existing risks.

A screening of the potential risks is then conducted based on the information gathered.

Below is a checklist that can be used to identify the project-related risks and define the level of detail that can be used for a possible Environmental Impact Assessment purposes.

The screening checklist is structured to be applied to all types of projects (specific checklists can be prepared for specific types of projects). It is important to bear in mind that this checklist also applies to actions involving the construction of (green or grey) infrastructure worth below the above-mentioned threshold of 300,000 euro.

If the checklist identifies risks classified as high and moderate (as defined below), the project will be subject to an EIA procedure to report the level of detail required to identify the vulnerability of the environmental receptors and indicate the environmental impact mitigation measures.

Otherwise, project activities can continue without further studies and investigations and the environmental assessment ends at the screening stage only and can also be archived for future reference.

3

BOX 5. TEMPLATE EIA SCREENING CHECKLIST		
EIA SCREENING CHECKLIST		
DATE	LOCATION	
DESCRIPTION OF THE PROJECT		
Instructions: the screening checklist helps to identify potential risks of the project and the level of assessment necessary for the projects. Answering YES might indicate a potential risk.		Enter your answers here: Yes/No/? Please provide a short description Yes, if the activity is likely to occur; No, if you think the activity is unlikely; ? - if it is uncertain whether the activity will occur or not; NO DATA: when the required data are not available on site
Will activities related to the construction, operation or liquidation of the project cause significant physical or ambient changes to the surrounding environment (topography, land use, changes in waterbodies, air quality, etc.)?		
Will the project require resettlement of individuals or communities, acquisition of land or restriction on the use of or access to land?		
Is the project located in an area subject to natural disasters: earthquakes, landslides, erosion, flooding or extreme or adverse weather conditions (e.g. temperature inversions, fog, severe winds, storms)?		
Are there sensitive receptors in the project area (e.g. unprotected underground water, water bodies, wildlife, flora, residential areas nearby, protected areas, nature reserves, parks)?		
Will construction or operation of the project use local resources such as land, water, materials or energy, especially any resources that are non-renewable or in limited supply? (wood that might be scarce resource, lack of space in congested areas)		

EIA SCREENING CHECKLIST	
Will the project alter the actual land surface conditions (e.g. soil compaction, impermeabilization), which might reduce the drainage capacity and increase the risk of flooding?	
Is the past use of the designated area of the project known? Would it impact (from an environmental point of view) the actual and future use of the site?	
Will the possible future use of the surrounding areas have an environmental impact on the site (if known)? (e.g. construction of a landfill next to a kindergarten, regardless of the project)	
Will the project produce solid/liquid waste during construction, operation or liquidation?	
Will the project release air emissions (e.g. are they toxic or polluting substances and/or significant greenhouse gas emissions)?	
Will the project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment? (e.g. chemicals, oils, pesticides, etc.)	
Will the project increase road traffic in the area or change actual traffic movements (e.g. closing or opening roads, resulting in heavy equipment movements)?	
Is there a possibility that the project will cause risks of contamination of land or water through pollutant releases onto sensitive receptors (e.g. ground or surface waters, groundwater, coastal waters or the sea)?	
Will there be any risk of accidents during construction or operation of the project which could affect human health or the environment?	
Will the project cause any social changes, for example in demography, resettlements, traditional lifestyles, employment or through physical disturbances (e.g. noise promotes sleep disturbances which in turn affect the risk of stroke, hypertension, etc.) or noise disturbances (e.g. damage to hearing; noise is a source of stress, etc.)?	

3

EIA SCREENING CHECKLIST	
Will the project be located in densely populated areas where it could affect the local population?	
Is the project located in an ecologically-sensitive area (e.g. wetlands, watercourses or other waterbodies, coastal zone, mountains, forests or woodlands)?	
Is the project located in an area sensitive in terms of flora and fauna (for breeding, nesting, foraging, resting, overwintering, migration)?	
Are there any areas around the location which are occupied by sensitive land uses (e.g. hospitals, schools, community facilities) which could be affected by the project?	
Are there any areas or features of high landscape or scenic value on or around the location which could be affected by the project?	
Are there any areas or features of archaeological, historic or cultural or religious significance on or around the location which could be affected by the project (e.g. cemeteries, religious sites, historical ruins or spiritual sites)?	
Will the project require the clearing of land or the removal of existing buildings and vegetation? In case of displacement of people (from houses) or collective infrastructure (from one area to another), has an urban and social survey been carried out as to where the buildings shortlisted for demolishment may be relocated with the involvement of the stakeholders[13]?	

[13]The answer to this question must however be consistent with the Urban Regeneration Handbook, to which we refer and which argues that resettlement is the last option to be considered in any development cooperation project.

3.3 EIA SCOPING PHASE

If the screening process identifies any high and moderate risks, EIA shall require a further step: the **scoping phase**.

The scoping phase aims, in fact, at identifying the most relevant environmental and socio-economic aspects of the proposed project, in order to lay the foundations for the adequate development of EIA by focusing resources on the most important issues. Therefore, it should reflect the risks identified in the screening phase.

Identifying the important elements of the scoping phase, however, can be difficult because it requires decisions to be taken before a detailed assessment of the project's effects on the environment can be made.

The scoping phase ends with a **Scoping Report**, which summarises the potential risks identified through document reviews and ground inspections. The Scoping Report should include a recommendation on the opportunity of undertaking an Environmental Impact Study and the level of such study, on the basis of the identified risks, outlining the following results:

- an overview of the project (infrastructure) and the legal and institutional framework. (If not included in the scope of the EIA, the environmental and climate-related risks, constraints and opportunities must be addressed, if relevant, in the general project formulation study);
- the design alternatives and their variants to be investigated;
- a description of the main stakeholders and their concerns;
- a stakeholder engagement plan (to be implemented during the EIA procedure)[14];
- a description of the geographical area to be considered in the environmental baseline and impact identification[15];
- a description of the key environmental aspects and project-environment interactions that should be addressed in the EIA[16] ;

[14]Concerning the pre-eminence of public consultation in the EIA procedure, we can refer here to the fact that by providing for the participation of stakeholders in relation to a project, the procedures help to enhance the transparency of the decision-making process, thereby increasing social consensus for the project.

[15]The preparation of a database on the state of the environment, consisting of pre-existing data, primary data collected and secondary data, becomes strategic for structuring the EIA procedure, but also for the phase of environmental communication to stakeholders.

[16]Regarding project-environment interaction, the approach must be twofold, i.e. it must consider not only the project's impact on the environment but also the possible effects of environmental factors on a project (in this case, the introduction of sophisticated technologies in tropical and/or equatorial contexts, where they can easily become damaged and therefore unusable). In this sense, the quality of the data collected can make the difference. There are non-existent environmental effects for the mere fact that there is no data to support and justify their existence.

- recommendations on specific methodologies for impact identification and assessment to be used in the EIA;
- an optional description of the proposed method to identify and evaluate the environment and risks, constraints and opportunities related to climate change;
- the indication of the time, costs and resources required to carry out the EIA study[17].

BOX 6. STANDARD FORMAT FOR THE EIA SCOPING REPORT

STRUCTURE OF THE REPORT

1. *Executive summary*
2. Description of the project under consideration and its alternatives
3. Applicable environmental legislative and institutional framework
4. Key stakeholders and their concerns
5. Key environmental aspects and project-environment interactions to be addressed in the EIA
6. Scope of the environmental baseline and areas of project influence
7. Recommendations on specific identification and evaluation methodologies
8. Timeframe and resources needed to carry out the EIA

3.4 ENVIRONMENTAL IMPACT STUDY (EIS)

If an **Environmental Impact Study** needs to be carried out at the conclusion of the investigations, this will take the form of a technical document identifying and defining the environmental and social risks of the project, for the purpose of providing recommendations on the mitigation measures of any significant environmental and social impacts. The Environmental Impact Study is at the heart of the EIA procedure. It cannot and must not be viewed simply as a technical and administrative tool, functional to the construction drawings phase of a project, decided beforehand.

The Environmental Impact Study consists of the following fundamental steps.

[17]The budget item for Environmental Impact Studies should be prepared in accordance with the concept note or the PdF (Financing Proposal) of a development cooperation action.

BOX 7. ENVIRONMENTAL IMPACT STUDY (EIS)	
ENVIRONMENTAL IMPACT STUDY	
Step 1 - Descrition of the Project	A detailed description of the aims and objectives of the project (work), the connections between the project and the economic, regional and urban planning and the environmental sector plans and programmes. The project under consideration is also represented through a list of all the activities it is composed of and to which it is connected, and of the possible events that may produce changes to it. The description of the project is usually accompanied by maps. The description should include: • a history of the project; • the applicable regulatory framework; • the technical characteristics of the project; • the type of labour used; • the characteristics of the location; • the needs during operation (supplies); • the production of direct interferences (discharges, waste, emissions...); • any technical risks (fire, accidental spillage...); • the work dismantling operations; • the mitigation measures for environmental impacts; • the monitoring systems; • the implementation timeframe.
Step 2 - Description of the Environment (Environmental Baseline)	Concerns the *ex ante* definition of the characteristics and environmental quality levels of the area in which the project (work) is located. The description of the environment must take into account the reliability of the information sources used and the quality of the information available. The description of the environment must also relate to the environmental profile of the partner country. An example of a checklist for collecting information for the environmental baseline is provided at the end of this box.
Step 3 - Description of the country's legal framework	This section sets out the laws, regulations and standards governing the environment, health and safety in the area and in particular: The social and environmental protection policies and procedures adopted by development cooperation agencies or the International Organizations to which the project may refer; The applicable laws and regulations of the local and national jurisdictions in which the proposed project will operate; The applicable international standards and agreements (e.g. multilateral environmental agreements) which must be observed. This also assesses the adequacy of the environmental policies, legal-regulatory and institutional framework supporting the proposed project, in particular the mitigation of environment

ENVIRONMENTAL IMPACT STUDY	
	impacts, monitoring and institutional responsibilities. The operators' role is to verify the project's compliance in relation to these aspects.
Step 4 - Analysis of alternatives	This step allows the identification of solutions that differ from the original project, in order to compare the possible impacts and make a considered decision. The alternatives allowed in an EIA can be subdivided into the following types: **strategic; location-based; process-based or structural; compensation or mitigation of possible adverse effects; and the zero alternative**, which consists of not implementing the project at all, taking into account the **positive and negative factors**. The zero alternative is a key point in the application of an EIA procedure, since it can question the validity of the project idea, which may be so in abstract terms but is not compatible with the real environmental and social context. The zero alternative also does away with the public consultation or decision-making phase, which requires a difficult balancing act between the different needs of the stakeholders.
Step 5 - Analysis and evaluation of impacts	The list of potential risks and impacts identified during the scoping phase is reviewed and updated. This step considers in more detail the type, location, sensitivity and scale of the proposed project, and analyses all likely and relevant environmental, social and other related effects, including potential impacts on: population and human health; biodiversity; land use, soil, water, air and climate; material assets, cultural heritage, landscape[18]; the interaction between the above factors. The impacts cross the entire life cycle of the project (work); for example, in the case of an infrastructure project, impacts on the environment must be taken into account during the construction, use and decommissioning phases of the work, as well as the ancillary construction activities. The spatial scope of potential impacts will include: • the primary project sites and related facilities to be developed or controlled by the implementing partners, such as buildings, energy transmission corridors, canals, tunnels, transfer and access roads, temporary storage areas and waste disposal areas where required by national law;

[18]The reference here is to the notion of landscape, which, under Italian law (see Legislative Decree 42 of 2004), is made a part of the holistic conceptual framework of cultural heritage, including both cultural and landscape assets. Obviously, this legislation does not apply outside the country, although it could be brought to the attention of the partner countries in which the AICS operates, given Italy's enormous experience in the cultural heritage protection sector. This notion of landscape is, in fact, unique on the international scene.

ENVIRONMENTAL IMPACT STUDY	
	• the associated structures which are not financed (or only partly financed) by the development cooperation action, in relation to the proposed project, and whose feasibility and existence depend exclusively on the project in question (e.g. water pumping station project in relation to the distribution network, which does not depend on the project. In Italy, for example, the meetings held between the local authorities and stakeholders (*conferenza dei servizi*), and other coordination committees, aim to harmonise projects with the context by assessing their impacts, beyond the scope of the projects themselves); • areas potentially affected by cumulative impacts arising from the planned development of the area, where activities are already present or are planned at the time the EIA is undertaken; (e.g. construction of an industrial plant in an already congested area)[19]; • areas potentially affected by impacts resulting from unplanned but foreseeable developments caused by the project and which may occur at a later stage or at a different location[20]; • cross-border impacts, such as the pollution of international waterways (rivers) or cross-border catchment areas; population migration; international agreements; • adverse global environmental and social impacts, e.g. greenhouse gas emissions, ozone depletion, loss of biodiversity and desertification; loss of cultural diversity and heritage. In the analysis of the impacts, the following factors must be taken into account (indicative list): • **Type and location**: is the project in a high risk area or does it include high risk components? Is it located in a sensitive area (e.g. densely populated areas, close to critical habitats, indigenous territories, protected areas, etc.)? • **Magnitude or intensity**: can an impact cause the destruction or serious deterioration of a social or environmental feature or system, or the deterioration of the economic, social or cultural well-being of a large number of people?

[19]In the context of development cooperation, in the partner countries, a project might be located in areas that are not subject to regional or urban planning; therefore, we have cumulative environmental impacts with synergic phenomena (e.g. increased levels of pollutants in urban or peri-urban areas which are already congested by vehicle traffic or manufacturing activities). In this case, the full importance of SEA emerges.

[20]The context in which a work might be located may also be suitable for other projects not covered by development cooperation actions; in other cases, cooperation actions, and the relevant structures, may create favourable conditions for new infrastructure, but outside any planning action.

- **Manageability:** will the accepted and relatively simple measures be sufficient to avoid or mitigate potential impacts or is a detailed study needed to understand whether impacts can be managed, and which management measures are required?
- **Duration:** will the adverse impacts be short-term (e.g. occurring only during construction), medium-term (e.g. over a five-year period) or long-term (e.g. in excess of five years)?
- **Reversibility:** is an impact reversible or irreversible?
- **Community involvement:** the absence of community involvement is a risk to the success and sustainability of any project. Were the communities affected by the project consulted during the planning and design phases? Will they have a substantial role to play in the project in the future?

Moreover, the following parameters should also be taken into account:
Direct/Indirect (primary/secondary) Impacts[21];
Cumulative/Synergistic Impacts[22];
Reversible/Irreversible Impacts[23];

Significatività degli impatti.

If no regulations or scientific standards are available, EIA professionals can assess the significance of the impact more subjectively by using the multicriteria analysis method[24]. In general, the EIA approach can change depending on the technical characteristics of the work or project.

[21]Direct impact: impact that occurs as a direct result of the action. Indirect impact: an impact that occurs as a result of one or more consequential impacts of the action (see ISPRA 2014).

[22]The cumulative nature of the impacts: the overall impact of several actions on the same environmental aspect. An impact is synergistic if the overall impact of several actions is greater than the sum of the impacts of the individual actions (ISPRA 2014).

[23]Reversible impact: impact for which, if the action were to be stopped, it would be possible to restore the original conditions in a shorter or longer (finite) timeframe or in any case the conditions existing prior to the action. Irreversible impact: impact for which it is impossible to restore the initial conditions (ISPRA 2014).

[24]Various methods of impact analysis exist in the specialist literature. In addition to multicriteria tests, they include multi-objective tests, network models, cluster analysis, impact matrices, multiple regression analyses as well as economic-estimation methods. The use of these methods depends on the type of project. These methods also allow the comparison of different impacts by geographical areas and/or alternative projects, e.g. the adoption of so-called "weighted ranking checklists" allow the comparison of different alternative locations of a project in order to minimise its local impacts.

ENVIRONMENTAL IMPACT STUDY

In some cases, the potential impacts may be both socio-economic and environmental, e.g. the damage from air pollution (emissions) on agricultural activity may be considered not only in ecological terms, directly on the crops and livestock, but also on the agricultural economy of the area as a whole.
The criteria commonly used to assess the significance of impacts[25] include the magnitude of the expected effect and the sensitivity of the receiving environment. Magnitude takes into account the characteristics of the change (time frame, scale, size and duration of the impact). Sensitivity is understood as the receiving environment's susceptibility to change, including its ability to accommodate any changes the projects may bring. The table below summarises the levels of sensitivity of the environment to potential impacts or change.

Scale of sensitivity of the receiving environment	
High	*High importance and rarity, national scale, limited potential for substitution and low capacity to accommodate proposed form of change.*
Medium	*Medium importance and rarity, national scale and limited potential for substitution. The receiving environment has some tolerance of the proposed change subject to design and mitigation.*
Low	*Low or medium importance and rarity, local scale. The receiving environment is tolerant of the proposed change subject to design and mitigation.*

Scale of magnitude of the impact	
Major	*Loss of resource and/or quality and integrity of resource over a significant area; severe change/damage to key characteristics, features or elements for more than 2 years; irreversible impact*

[25] In other cases, the significance of impacts (S) can be calculated numerically as the product of the severity of an impact (G) by the probability of its occurrence (P): S = G*P.

Scale of magnitude of the impact	
Moderate	*Loss of resource, but not adversely affecting the integrity over a significant area; partial loss of/damage to key characteristics, features or elements, for more than 6 months but less than 2 years.*
Minor	*Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.*

These two matrices on sensitivity and magnitude can be combined to compile a simple matrix of significance as shown in the table below.

Impact magnitude	*Environmental sensitivity*		
	High	*Medium*	*Low*
Major	*High*	*High*	*Moderate*
Moderate	*High*	*Moderate*	*Minor*
Minor	*Moderate*	*Minor*	*Negligible*

On the basis of the identified impacts, monitoring and mitigation measures will then have to be defined through the management and monitoring plan for environmental and social impacts.

Step 6 - Finalisation and Preparation of the EIA Report

The EIA report is prepared to describe the information gathered and the analyses and assessments carried out and to identify the impacts and risks of a project. It is a technical report that must be presented in an understandable format and in one or more languages (if required). Short summaries and graphical presentations will often be required to facilitate reading and understanding. In addition, a non-technical summary, which can be understood by different stakeholders, should be included to facilitate and encourage comments.

The EIA report must be supported by a summary of the data collected and the references used for data collection and must contain the following elements:

ENVIRONMENTAL IMPACT STUDY

- **executive summary:** summary of the main findings and recommended EIA actions concerning the environmental and social feasibility of the project;
- **project description:** brief description of the proposed project, including maps and diagrams of the project site, its area of influence and all associated facilities. Details of the relevant institutional and legal policy framework. A discussion of the political, institutional, legal, environmental and social frameworks associated with the project, including any project-specific legal requirements (e.g. concession contracts, etc.), or other requirements;
- **baseline data:** a description of existing environmental and social conditions relevant to the project decision-making process, both at the proposed project sites/locations and in its area of influence;
- **impacts and risks:** an analysis of direct, indirect and cumulative environmental and social impacts and risks. A summary of opportunities for improving environmental and social benefits. An assessment of the quality of available data and other key information and data gaps;
- **analysis of alternatives:** a summary description and evaluation of the alternatives considered, the rationale for selecting the proposed alternative and a description of its impacts;
- **recommendations:** options and recommendations to prevent, avoid, reduce, mitigate, eliminate or compensate for any adverse impacts of the selected alternative.

BOX 8. CHECKLIST FOR DESCRIBING THE ENVIRONMENTAL SETTING IN THE EIA STUDY

CHECKLIST FOR DESCRIBING THE ENVIRONMENTAL SETTING IN THE EIA STUDY	
Date	Place Coordinates (map references)
Climate characteristics	Temperature Wind speed and direction Humidity Precipitation Climate characteristics
Data collection according to the technical type of the work	Compiler references

3

CHECKLIST FOR DESCRIBING THE ENVIRONMENTAL SETTING IN THE EIA STUDY	
Site data	
Aspects	Description (type, size, condition, location, current status)
LAND USE INFORMATION	
Description of past and current land use (greenfield/brownfield, military site, industrial site, residential site...)	
Description of past and current use of the surrounding areas (housing, warehouses, industry, retail, energy, medicine...)	
Future construction or development projects planned on or adjacent to the site	
Existing infrastructure	
Condition of access roads (e.g. considering seasonal variations)	
Available energy sources (e.g. electricity, gas, renewable)	
Existing water supply system (e.g. municipal water supply systems, wells, dams, lakes or rivers)	
Wastewater collection and treatment (e.g. open sewerage, public sewage system)	
NATURAL DISASTERS	
Risk of flooding	
Previous flood records	
Earthquake risk	
Seismic zone	
Proximity to a volcanic area	
Record of previous earthquakes or volcanic eruptions	
Cultural and historical and social context	

CHECKLIST FOR DESCRIBING THE ENVIRONMENTAL SETTING IN THE EIA STUDY	
Presence or location in the vicinity of: • Protected natural areas • Areas of historical/archaeological interest • Areas of religious or cultural significance	
AGRICULTURAL STRUCTURES	
Presence of livestock and agricultural activities (e.g. animal husbandry, farmland)	
Industrial plants	
Presence of active or abandoned industrial facilities within or adjacent to the site (e.g. Describe the type of industries and the conditions)	
Presence of air emissions in the vicinity (e.g. industrial chimneys, incinerator outlet, type, height of chimneys)	
Presence of above- and underground storage tanks (e.g. type, condition, proximity, size, number, content and quantity of stored components	
LIQUID WASTE MANAGEMENT FACILITIES	
Presence of operational wastewater treatment plants (e.g. Standard conditions)	
Evidence of current or previous use of septic systems (e.g. type, size, current condition/status...)	
Evidence of wells, ponds or lagoons that are or may have been associated with the treatment of liquid waste or disposal of liquids	
Description of current practices for the collection, treatment and disposal of wastewater and sludge	
SOLID WASTE MANAGEMENT FACILITIES	
Presence of active, inactive or abandoned landfills	
Presence of municipal landfills in the vicinity	
Presence of waste incinerators in the vicinity	

3

CHECKLIST FOR DESCRIBING THE ENVIRONMENTAL SETTING IN THE EIA STUDY	
SOLID WASTE MANAGEMENT FACILITIES	
Active or inactive or abandoned hazardous waste landfills	
Practices in place regarding solid waste collection, storage treatment and disposal (e.g. reuse and recycling) in the neighbouring community	
Collection, treatment and disposal of hazardous waste	
On-site presence of materials or devices containing: asbestos (e.g. pipes, pipe insulation and construction materials), Polychlorinated biphenyls (PCB) (e.g. electrical/hydraulic equipment), Lead (batteries)	
On-site presence of Unexploded Ordnance (UXO) and mines	
On-site presence of radioactive materials	
TOPOGRAPHY AND TERRAIN	
Description of the lay of the land (e.g. hills, slopes, flat or rugged terrain, sinkholes)	
Location in a classified area (e.g. area prone to flooding or seismic area, volcanic area)	
GEOLOGY	
Description of the local geology (e.g. on the basis of information collected or drilling activities implemented, geological records collected or excavation activities)	
HYDROLOGY AND SURFACE WATER QUALITY	
Presence of rivers, lakes, streams and ditches in the vicinity of the site (e.g. distance, upstream or downstream)	
Type and characteristics of ground cover (e.g. fissured soil, compacted soil, swamp)	
Plant coverage (e.g. trees, shrubs, meadows, pastures) or type of paving (e.g. sand, asphalt, gravel)	
Areas prone to flooding (e.g. presence of drainage trenches, flood protection infrastructure)	

CHECKLIST FOR DESCRIBING THE ENVIRONMENTAL SETTING IN THE EIA STUDY	
HYDROLOGY AND SURFACE WATER QUALITY	
Presence of standing water in the vicinity, lagoons (natural or artificial), ponds	
Presence of hazardous installations upstream (e.g. industries, production sites, livestock breeding activities).	
Presence of water abstraction points: active, inactive or abandoned (e.g. For what purpose is the water used? Is it treated or used directly? Is water quality monitored?)	
Presence of discharges into the water body (e.g. industrial wastewater, stormwater, untreated sewage)	
Water bodies are used by neighbouring communities (e.g. recreational activities, swimming, fishing)	
HYDROGEOLOGY AND GROUNDWATER QUALITY	
Active, inactive or abandoned water abstraction points. Purpose of use? Treated or untreated water? (e.g. number of people served, sustainable yield, risk of saltwater penetration)	
Depth of groundwater	
Average depth of water wells	
Wastewater discharge measured (l/s)	
Type of aquifer Underground layers of soil Soil composition	
Groundwater flow direction	
Groundwater quality Collected water samples Monitoring Results	
Presence of monitoring wells	
SOIL QUALITY	
Soil samples collected?	
Presence of visible signs of soil pollution?	

3

CHECKLIST FOR DESCRIBING THE ENVIRONMENTAL SETTING IN THE EIA STUDY	
AIR QUALITY	
What is the air quality? How is the quality of the air perceived? (e.g. bad odour, presence of smoke or emissions)	
Which factors contribute to air quality (e.g. odour/smoke/dust)?	
NOISE POLLUTION	
What are the current noise conditions? High? Low?	
Presence of activities generating significant noise levels?	
BIODIVERSITY	
Presence of sensitive ecosystems and protected areas (e.g. parkland)	
Description of local vegetation	
Presence of fauna/insects, local species	
Presence of sensitive/endangered species	
Environmental incidents	
Reports of past environmental incidents	
Contamination observed	
Reported environmental incidents	
Evidence of oil contamination	
OTHER COMMENTS	

BOX 9. STANDARD INDEX OF AN ENVIRONMENTAL IMPACT STUDY/SIA

STANDARD INDEX OF AN ENVIRONMENTAL IMPACT STUDY/VIA

1. Executive summary
2. Background
   - A. Project justification and purpose
   - B. Project location
   - C. Project description and associated activities
   - D. Alternatives
   - E. Environmental policy, legislative and institutional framework
3. Approach and methodology
   - A. General approach
   - B. Geographical or mapping units
   - C. Environmental quality indicators
   - D. Assumptions, uncertainties and constraints
4. Environmental baseline study
5. Impact identification and evaluation
6. Mitigation/optimisation measures and residual impacts
7. Conclusions and recommendations on impact mitigation and optimisation
   - A. Statement of impact

   (This section must include one of the three "statements of impact" set out below:
   - The alternative(s) (name or number of concerned alternatives) will not have a significant environmental impact, providing that the measures recommended in the EIA are followed through;
   - The less damaging alternative(s) identified (name or number) will have some significant environmental impacts, which cannot be feasibly mitigated. Therefore, it is recommended to identify and assess additional alternatives or to check that the expected social and economic benefits are sufficiently high in order to justify the project despite its environmental impact;
   - The less damaging alternative(s) identified (name or number) will have some significant environmental impacts, which cannot be feasibly mitigated. Therefore, it is recommended to identify and assess additional alternatives or to check that the expected social and economic benefits are sufficiently high in order to justify the project despite its environmental impact;

   B. Conclusions and recommendations

   This section must present a clear statement of the conclusions and recommendations on actions to be taken to ensure that environmental issues are adequately addressed in subsequent project preparation, implementation, monitoring and evaluation phases. These conclusions and recommendations must be complete, yet concisely and clearly formulated, so that this section can be incorporated into the project documentation.
8. (Optional) Identification and evaluation of environmental and climate-related risks, constraints and opportunities.
9. (Optional) Proposed adaptation and risk management measures.
10. (Optional) Conclusions and recommendations on environmental and climate-related risks and constraints and opportunities.

3

3.5 MANAGEMENT AND MONITORING PLAN FOR ENVIRONMENTAL AND SOCIAL IMPACTS (ACTION PLAN)

Taking into account the relevant results obtained so far in the application of the EIA procedure and the results of the consultation with the project stakeholders, a **management and monitoring plan for environmental and social impacts** must be prepared and be made an integral part of the project design.

The plan consists of a set of mitigation and monitoring measures and procedures (as well as the actions required to implement these measures) to achieve the desired environmental and social sustainability outcomes. It may consist of either a brief description of routine mitigation and monitoring measures, or a series of specific environmental and social plans, including, for example, action plans for biodiversity conservation, management plans for hazardous materials or physical and cultural resources, gender mainstreaming plans, emergency preparedness and response plans, community health and safety plans, and plans for indigenous peoples.

The level of detail and complexity of a plan and the priority given to the identified measures and actions should be commensurate with the risks and impacts of the proposed project.

Definition of environmental and social impact mitigation actions/ measures

The plan should include actions for achieving environmental and social impact mitigation in order to

- avoid, prevent or eliminate environmental and social risks and adverse impacts, where technically and financially feasible;
- where it is not technically or financially feasible to avoid, prevent or eliminate risks and impacts, to identify measures and actions capable of mitigating, minimising or reducing the impacts so that the project may operate in accordance with applicable international, national and local environmental and social laws and regulations or otherwise defined and agreed acceptable levels of impacts;
- where it is not technically or financially feasible to mitigate, minimise or reduce risks and impacts, to identify measures capable of compensating them by improving the positive environmental and social impacts of the proposed project;
- where prevention, mitigation and compensation measures are not technically or financially feasible, to identify compensatory measures to offset the residual adverse impacts.

The plan shall contain a description of each mitigation measure, including the type of impact and the related environmental and social parameters, the location and frequency, the timing or conditions under which the measure is required (e.g. on an ongoing or contingency basis), and provide technical details on the mitigation technology, process, equipment, design and operating procedures. The potential environmental and social impacts of these measures will also be estimated, and links with other specific mitigation plans (e.g. for involuntary resettlement, indigenous peoples or cultural heritage) required for the proposed project will be identified.

Social and environmental monitoring

The plan must also detail the environmental and social monitoring required during project implementation, in order to: i) gather information on actual versus anticipated environmental and social impacts, ii) measure the effectiveness and assess the success of the mitigation measures, iii) evaluate compliance with international, national and local laws, regulations, safeguards and iv) allow corrective actions to be taken when necessary.

The plan should contain:

- the mitigation measures being monitored;
- the parameters to be measured;
- the sampling and analysis methods or other monitoring methods to be used, including personnel, procedures and detection limits (if applicable);
- the sampling or monitoring sites;
- the frequency or timing of the measurements;
- the definition of thresholds signalling the need for corrective actions.

Besides information recording activities, to monitor performance and establish relevant operational controls, the plan will require inspections and audits, where appropriate, to verify compliance and progress towards the desired outcomes.

For projects with different, irreversible or unprecedented significant impacts, the plan will require the involvement of additional experts to verify the monitoring information.

The monitoring plan shall also set out the relevant roles and responsibilities for its attention, requiring the assessment of capacities within the implementing Organisations or Institutions. Otherwise, it should be established whether the appropriate capacities can be developed and, if so, at what cost, over what period of time, and in what manner.

3

Development of a communication plan

The plan shall be developed in close consultation with the project stakeholders and include a section outlining a plan for communicating the progress made during the implementation of the actions involving risks and/or impacts on the stakeholders. It will also define a grievance mechanism, for the purpose of giving stakeholders the opportunity to express their views, in relation to any environmental risks that can also affect public health. In the case of a substantial revision of the monitoring plan and/or additions to the mitigation and monitoring measures, changes should be developed jointly with the stakeholders and communicated by means of reports in an easily accessible format. The frequency of these reports shall be proportional to the stakeholder concerns but, in any case, no less than once per year. **The communication plan must be consistent with the Aarhus Convention** (1998) on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters. The partner country, if it has ratified this Convention, must prepare a national report on its implementation.

BOX 10. EXAMPLES OF POSSIBLE PROJECTS QUALIFYING FOR AN EIA

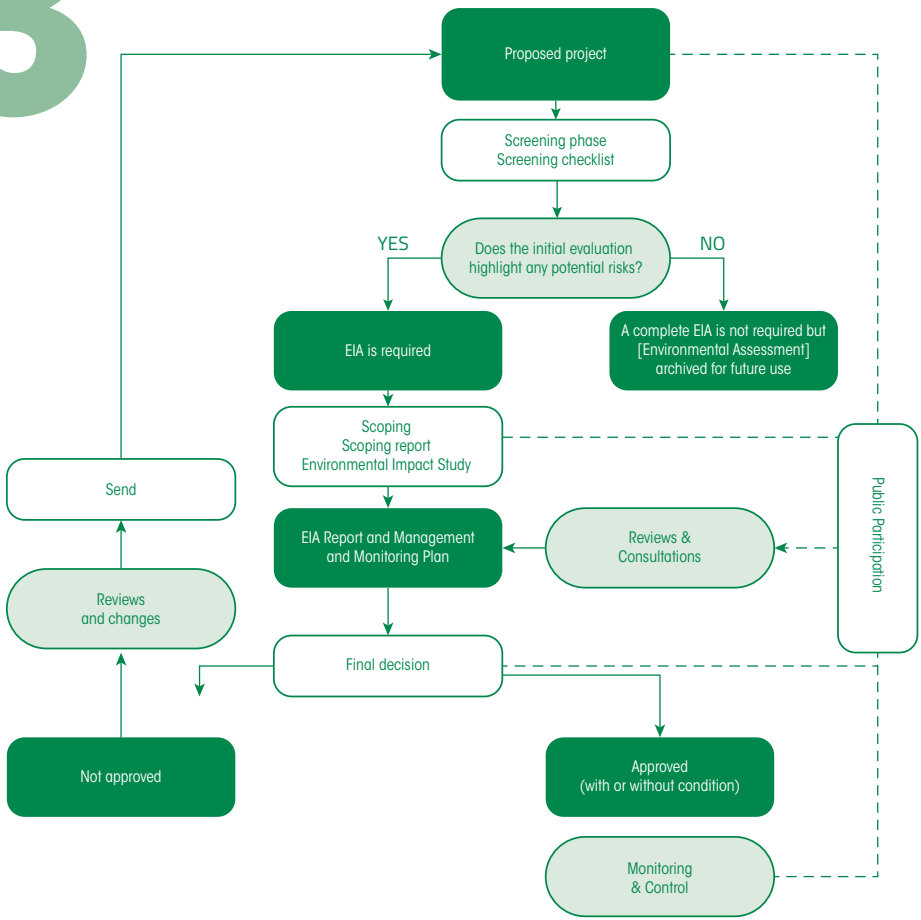
EXAMPLES OF POSSIBLE PROJECTS SUBJECT TO EIA

Abstraction and impoundment activities
Groundwater abstraction or artificial groundwater recharge schemes, where the annual volume of water to be abstracted or recharged is 10 million m3 or more
Industrial-scale commercial harvesting operations of tree plantations
Deforestation or large-scale deforestation of large areas
Large-scale peat extraction
Large-scale quarrying, open-cast mining and processing of metal ores or coal
Large-scale reclamation or maritime dredging operations
Change of use of uncultivated, semi-natural or natural areas for intensive farming or forestry involving conversion of natural habitats
Installations for intensive livestock and/or fish farming; industrial plants for the production of pulp from timber or similar fibrous materials or for the production of paper and cardboard
Large-scale installations for the intensive animal farming (poultry or livestock)
Installations for tanning animal hides, where the processing capacity exceeds 12 tonnes of finished product per day
Large-scale infrastructure (construction and/or extension)
Construction of motorways, superhighways and railway lines; airports; new roads with four or more lanes; realignment and/or widening of existing roads to provide four or more lanes for continuous stretches of 10 kilometres or more
Large sea and river ports and inland waterways and ports for inland waterway traffic; commercial ports, piers for loading and unloading connected to land and outer ports (excluding ferry piers)
Large and complex dams and other reservoirs designed to hold or store water permanently, including, for example, for hydroelectric projects, water supply for irrigation or municipal

EXAMPLES OF POSSIBLE PROJECTS SUBJECT TO EIA
water supply and other purposes and flood control Large-scale energy and fuel projects, including transmission/transport (construction and/or expansion) Thermal power stations and other combustion plants (with a thermal output of at least 300 MW) Facilities for the storage of petroleum, petrochemical or chemical products Pipelines, terminals and associated facilities for large-scale transportation of gas, oil and chemicals Construction of high voltage overhead, underground or submarine power lines Large wind power plants for energy production (wind farms) CO2 capture plants (generally 1.5 mega tonnes or more) and construction of sites for geological storage of CO2 Waste and chemicals projects Waste treatment and disposal installations for the incineration, chemical treatment or landfilling of hazardous or toxic waste Large-scale waste disposal plants for the incineration or chemical treatment of non-hazardous waste (generally with a capacity exceeding 100 tonnes per day) Municipal wastewater treatment plants with a capacity of more than 150,000 population equivalent Municipal solid waste treatment and disposal plants Integrated chemical plants, i.e. plants for the industrial-scale manufacture of substances by means of chemical conversion processes, in which several units are juxtaposed and functionally linked to each other, dedicated to the production of: basic organic chemicals; basic inorganic chemicals; phosphorous-, nitrogen- or potassium-based fertilisers (simple or compound fertilisers); basic plant protection products and biocides; basic pharmaceutical products using a chemical or biological process Large-scale tourism and retail development

3

BOX 11. DIAGRAM OF ENVIRONMENTAL IMPACT ASSESSMENT PROCESSES



4 CLIMATE RISK ASSESSMENT (CRA)

Climate Risk Assessment[26] (abbreviated as CRA) aims to provide recommendations concerning measures to reduce a variety of climate-related risks and to ensure that a project contributes to environmental and economic sustainability by addressing climate change.

A CRA also addresses the possibility that a project may contribute to wider societal maladaptation[27] to climate change. Conversely, actions aimed at ensuring adaptation to the effects of climate change seek to reduce the vulnerability of human or natural systems to the impacts of climate change and climate-related risks.

This includes a range of activities such as:

- supporting the integration of climate change adaptation into national and international policy, plans and programmes; and/or
- improving regulations and legislation to provide incentives for adaptation; and/or
- carrying out education, training and public awareness actions, in relation to the causes and impacts of climate change and the role of adaptation; and/or
- implementing climate research actions related to adaptation, including meteorological and hydrological observations and forecasts, impact and vulnerability assessments, and early warning systems.

The approach indicated by the United Nations Framework Convention on Climate Change (UNFCCC), with respect to adaptation, is based on the adaptation cycle, which is composed of four steps:

- assessing impacts, vulnerability and risk;
- preparing nationwide and/or local adaptation plans;
- providing for investment measures;
- monitoring and evaluating adaptation.

[26]Risk is frequently represented as the probability of occurrence of a negative event or hazardous trend, multiplied by the impacts of the said events or trends if they occur. Risk is the result of the interaction between vulnerability, exposure and hazard source:
RISK = VULNERABILITY (A) + EXPOSURE (B) + HAZARD (C) (www.masteradapt.eu)

[27]Maladaptation is an action taken with the intention of avoiding or reducing vulnerability to climate change but which, on the other hand, negatively impacts or increases the vulnerability of other systems, sectors or social groups.

4

Based on the CRA, a ***Climate Risk Management Plan*** **(CRMP)** shall be drawn up to monitor mitigating actions over time.

In many cases, it is possible to carry out **a simplified CRA**, based on rapid screening and using available evidence. It is important to emphasise that climate risk assessments should be sufficiently detailed to inform decision-making, but not excessively burdensome in terms of human and financial resources. Therefore, assessment can take various forms, ranging from simple narratives or summaries of available data to complex technical analyses based on potential risks and operational constraints.

Whenever a CRA is required, it should be defined how it and other studies (e.g. "general" formulation study, financial and economic analysis, other climate, environmental or vulnerability studies) will be incorporated into the formulation phase.

In this regard, the following should be considered:

- the scope of the studies to be carried out at the formulation stage must be clearly defined to ensure complementarity and avoid overlap between the CRA and other studies. Close coordination is therefore required in preparing the Terms of Reference for these studies and, where possible, the different studies should be integrated in a single process;
- the studies must be based on sufficient technical information and must assess realistic options, which can influence the selection of project alternatives and final designs, through appropriate measures;
- ideally, a CRA should precede the economic analysis, which must incorporate the costs of impact reduction and adaptation measures and possibly also value specific residual environmental externalities and costs associated with potential climate change risks.

As far as the background is concerned, the CRA must examine:

- climate-related risks to the successful realisation of the project's intended outputs and outcomes;
- risks that the project will increase the vulnerability of human populations and/or natural systems to climate change and variability;
- the risks that the project will contribute to maladaptation;
- measures to reduce climate-related risks and adapt to climate change, to be described in a Climate Risk Management Plan (CRMP);
- opportunities for promoting greater resilience and adaptation to climate change, and encouraging low-carbon development.

The CRA will provide sufficient information to justify the acceptance, modification or rejection of the project, on the grounds of its sustainability and viability under climate change. It will also provide the basis for guiding subsequent actions, which will ensure that the project is carried out taking into account any climate-related risks and needs and adaptation needs and options.

4.1 CRA PROCESS

The CRA process is undertaken in two stages: firstly, a scoping study, which defines the scope of the CRA, and secondly the CRA study itself.

4.2 CRA SCOPING STUDY

The scoping study will summarise the project, identify key stakeholders, and describe the hazards, vulnerabilities and resulting risks to be assessed in the CRA study, based on information on current and future hazards and risks already available in key sources of climate information (IPCC reports, NAPAs/NAPs, National Communications to the UNFCCC and other sources.

The scoping study will also specify what approaches, tools and methods are to be employed to assess key aspects of risk and vulnerability and key knowledge gaps. The types of risk reduction or adaptation measures to be assessed may be broadly identified during the scoping study, and monitoring and evaluation (M&E) mechanisms proposed.

In a nutshell, the CRA scoping study will provide:

- an overview of the project, including the timescales associated with project implementation and intended outcomes. A description of any project alternatives;
- an overview of the relevant policy, legislative and institutional frameworks (if they exist);
- a description of the geographical, environmental and climatic contexts within which the project will be implemented, including a summary of readily available information on potential future climate trends and climate change, as far as this is relevant to the timescales associated with the project;
- a description of the key stakeholders likely to be affected by the project, with reference to the specific climate-related risks;

4

- a stakeholder engagement plan (if deemed relevant);
- a summary of the key current and expected future climate hazards relevant in the context of the project, and of the associated potential climate-related risks/implications for the project, that should be addressed in the CRA, insofar as these can be identified on the basis of the best available information;
- a summary of key issues relating to vulnerability and adaptive capacity as relevant to the project context, as far as possible based on existing information;
- a description of key knowledge/information gaps relating to current and future climate hazards, recent and potential future climate change impacts;
- recommendations on the method for the identification and assessment of specific climate-related risks, constraints and opportunities (including treatment of uncertainty) and the basis for the choice of methodologies to be used in the CRA to assess risks and vulnerabilities;
- recommendations regarding any risk reduction or adaptation measures that might be identified and investigated further in the CRA, based on the work of the scoping study;
- an indication of the time frames, costs and resources needed to carry out the CRA study

The scoping study consists of the following elements:

BOX 12. CRA SCOPING STUDY	
CRA SCOPING STUDY	
1) Overview of the project (and its alternatives)	A description of the project,its components and feasible project alternatives.
2) Legislative, institutional and planning framework	A description of the institutional and legislative frameworks relevant to the project and its CRA must be made, including an indication of the key applicable legislation, planning processes (e.g. land use planning), standards and norms that will have to be addressed in the CRA study. Reference should be made to the relevant documentation, such as the Country Environmental Profile, National Adaptation Plans of Action/National Adaptation Plan (NAPAs/NAPs), or other national adaptation plans/strategies, National Communications to the UNFCCC, and to any relevant Strategic Environmental Assessments.
3) Description of the key stakeholders and their concerns	The engagement of stakeholders in the CRA process is a key success factor. Project stakeholders (key groups and institutions intended as beneficiaries of the project or project partners, and any groups potentially affected by any likely adverse – e.g. environmental or displacement – impact of the project) will be identified. Particular attention should be paid to typically less represented groups such as women, indigenous peoples and minorities. Stakeholders will be engaged by the developer of the study in order to identify their concerns, with respect to existing and anticipated climate-related risks and vulnerabilities, their perceptions of how these may be affected by the project, and their views about how these risks and vulnerabilities might affect the project results and impacts. The stakeholder engagement strategy to be employed should be explained in the proposal.
4) Description of the key climate-related risks and project-climate interactions that should be addressed in the CRA	Based on contextual information on current and potential future climate hazards, the climate-related risks to be specially considered under the following categories should be identified: • risks to the successful or timely implementation of the project; • risks to the successful realisation of the intended project benefits over timescales that may be significantly longer than the lifetime of the project itself; • risks that the project may increase the vulnerability of specific groups[28];

[28]E.g. irrigation projects that favour one community and unintentionally disadvantage another.

CRA SCOPING STUDY	
	• risks that the project may increase the vulnerability of natural systems or resources[29]; • risks that the project will contribute to maladaptation, increasing dependency on resources threatened by climate change.
5) Summary of existing baseline information and the dissemination thereof	The scoping study should summarise the information currently available, as relevant to the project, relating to (i) current climatic and environmental conditions, (ii) potential future climatic conditions, (iii) relevant current and future climate hazards, impacts, vulnerabilities and related risks. Key information gaps in these areas should be identified, and the extent to which these information gaps may be filled by further study during the CRA study should be specified. The nature of any additional information on these baseline issues that will be generated during the CRA study should also be identified.
6) Recommendations on the assessment methodologies to be used in the CRA	An indication of the most appropriate tools and methods for carrying out the CRA study should be provided (e.g., model-based impacts or sensitivity studies, participatory vulnerability assessments, scenario planning, indicator-based mapping exercises, or other methods such as expert review). The limitations of such tools and methods should be specified (e.g., the spatial resolution of climate model output, the degree of confidence in downscaling studies, the extent to which key indicators capture the most important dimensions of vulnerability, and so on). The ways in which uncertainty will be addressed should be specified (e.g., by using multiple models or simulations, a range of different scenarios, or a range of different assumptions about the future evolution of vulnerability).
7) Indication of the timeframe, costs and resources needed to carry out the CRA	The temporal and spatial extent of the CRA study should be specified, including the identification of any geographical areas, communities/populations, institutions, natural systems, sectors or systems/infrastructure to be studied. A description and estimation of the resources required, including a break-down of costs, must be provided.

[29] E.g. water stress.

4.3 CRA STUDY

The need for a CRA is determined by a climate risk screening process. In many cases, a simplified CRA may be carried out, based on a rapid screening exercise using a limited set of information sources, as prescribed, to assess the implications of climate change in more detail and identify strategies and measures to address the risks incorporated into the project/programme design and implementation.

If the available information is lacking or incomplete, the decision may be taken to carry out a more in-depth study to fill the information gaps and gather the required information, depending on an assessment of the relevant costs and time.

Both options – whether a "simplified" CRA or a CRA Study – involve scoping activities based on the assessment of easily available climate information and/or the key issues concerning risks linking climate change and development activities.

The **CRA study** will analyse the climate risks of the project, based on current conditions and climate trends and on long-term future climate projections.

The **need for a CRA study** is determined by a climate risk screening process. In many cases, it is possible to carry out **a simplified CRA**, which is based on rapid screening using available evidence.

The study should address:

- climate change-related risks to project outputs. For example, the implementation of a project might be disrupted by the occurrence of climate extremes that are more frequent or severe than anticipated, or the integrity of infrastructure may be at risk from increased recurrence or magnitude of extreme weather events expected under climate change;
- climate change-related risks to project outcomes. An example is increased poverty due to climate-related crop losses or higher food prices, offsetting other poverty reduction measures, or increased water stress due to lower rainfall and higher temperatures, that offset gains due to improved water use efficiency;
- the adaptation deficit to current climate variability and change, which lead communities to be vulnerable to climate risk.

The CRA study will provide:

- Ian identification and assessment of the potential climate-related risks to project implementation and the successful

realisation of the project's intended benefits;
- an identification and assessment of the potential risks that the project implementation will increase the vulnerability of human populations and natural systems to climate variability and change, and to contribute to maladaptation;
- recommendations, including a Climate Risk Management Plan (CRMP) for the implementation of proposed measures to reduce climate-related risks and adapt to climate change. The CRMP may identify and prioritise a number of alternative risk reduction/adaptation measures, detailing the pros and cons (e.g. costs, impacts) of each of them. The CRMP should also include a framework for monitoring and evaluating the performance/success of the proposed measures;
- recommendations on how to adapt the project design (if required) to optimise the exploitation of opportunities arising from climate change (if any), to promote wider climate resilience, adaptation and adaptive capacity;
- the scope of the study will be agreed with the partner government and other international partners, based on the outcome of the scoping study.

BOX 13. CRA STUDY

CLIMATE RISK BASELINE STUDY

1) Existing climate risk context	**Expected context of the existing climate risk** This should describe the following existing conditions, as far as these are relevant in the project context: • the geographical and environmental context of the project (e.g. location), and the current climatic conditions specific to the area(s) associated with the project. This should include a description of the main climate hazards and their impacts currently experienced in these areas (e.g. heavy rainfall and flooding, drought and food insecurity or interruption to hydropower, storms or storm surges and mortality/displacement/destruction of property and infrastructure); • the existing vulnerability context in which hazards are translated into impacts, i.e. which populations, areas, groups, systems or sectors are most affected by climate hazards, and what are the drivers (e.g. social, economic, geographic, policy, etc.) of their vulnerability; • the level(s) of adaptive capacity in the relevant groups, populations, systems, sectors, institutions. What options are there for effective responses to manage and reduce existing risks, and what are the constraints that prevent action to reduce risk being taken?

CLIMATE RISK BASELINE STUDY	
	Expected future climate risk context This should seek to examine how conditions might evolve in the future, with respect to: • the potential future evolution of climate hazards (both sudden-onset and slow-onset). The characterisation of future climate hazards may be based on data from global and regional climate models, downscaling studies, and/or impact models (e.g. of water resources, crop yields, coastal systems, ecosystems, etc.). Alternatively this characterisation may employ expert judgment, past analogues (e.g. of extreme events/conditions), statistical techniques (e.g. to examine the impacts of changing means and variability of the occurrence of extremes using historical data as a baseline); • the potential future evolution of vulnerability, based on plausible assumptions about how the drivers of vulnerability may change in conjunction with changing economic, demographic, environmental and other conditions; • the potential future evolution of adaptive capacity and opportunities, as well as constraints on adaptation actions.
2) Climate-related risk identification and evaluation	Identification and description of the potential climate-related risks associated with the project (and any alternatives), and evaluation, based on combined considerations of the relevant climate hazards and relevant aspects of vulnerability and adaptive capacity. The identification of risks should address the following: • risks to the successful or timely implementation of the project, for example associated with climatic extremes which may be intensifying, and which may damage project infrastructure or otherwise disrupt implementation; • risks to the successful and sustained realisation of the intended project benefits over timescales that may be significantly longer than the lifetime of the project itself; • risks that the project may increase the vulnerability of specific human groups, for example by reducing their access to key resources, constraining their options for coping with or responding to climate hazards and their effects, and compromising their capacity to adapt to climate change; • risks that the project may increase the vulnerability of natural systems or resources, amplifying the adverse effects of climate change on these systems/resources, and accelerating environmental degradation; • risks that the project will contribute to maladaptation, increasing dependency on resources threatened by climate

	change or contributing to development trajectories that might be unsustainable under future climatic conditions. Risks should be described for different elements of the project, and for different stakeholders/groups participating in or affected by the project. Where risks are associated with the potential adverse impacts of the project (e.g. on vulnerability or maladaptation), project and no-project cases should be compared, considering the various project alternatives and including considerations of uncertainty for each case.
3) Identification and evaluation of opportunities and benefits	A CRA study also provides a context in which opportunities may be identified for promoting climate resilience and adaptation and, if appropriate, low-carbon development. These may include opportunities for: piloting new climate-resilient agricultural practices, technologies or crops; awareness-raising, communication and training; promoting risk mitigation measures, such as livelihood diversification and including the development of weather-related insurance; gathering data and information; linking with other relevant initiatives to promote resilience and adaptation and improving policy dialogues. Opportunities or "entry points" for new climate resilient practices or low-carbon development should be considered in the context of the project.
4) Measures and recommendations in relation to climate-related risks and opportunities	Measures must be proposed to reduce the climate-related risks identified above and, if appropriate, to ensure that any opportunities are exploited effectively. These risk reduction or adaptation measures must be technically feasible, economically sound and socially acceptable (i.e. they must take into account the views of the main stakeholders). Measures to reduce risks and adapt to climate change in the shorter term must be compatible with any longer-term adaptation needs, and it should be ensured that measures to deliver adaptation or reduce risks in the shorter term do not increase vulnerability or contribute to maladaptation in the longer term. Risk reduction/adaptation measures can have several distinct aims: • measures to reduce physical exposure of any project infrastructure to climate hazards and their related impacts (e.g. sudden-onset climate-related hazards and disasters, slow-onset hazards such as sea-level rise); • measures to improve the project's ability to operate under identified constraints that may change over the course of the project's lifetime (e.g. choice of most water-efficient or energy-efficient production options, avoiding locating of water-intensive activities in areas where climate change is

CLIMATE RISK BASELINE STUDY	
	likely to increase existing water stress); • countering any potential increases in vulnerability resulting from the project among specific groups or of specific systems (e.g. ecosystems, natural resources, landscape systems); • targeted measures to address specific impacts of climate change identified during the CRA Study; • enhancing of adaptive capacity through measures to increase access to key resources, raise awareness, deliver training on adaptation issues, to ensure that project implementation and the delivery of longer-term benefits account for and address climate change issues; • development of specific risk reduction / adaptation strategies and frameworks within measures may be • identified, implemented and revised over time; • significant redesign of the project where it is concluded that the project or elements of the project may contribute to "maladaptation". Residual risks after the application of the proposed risk reduction / adaptation measures must be identified and assessed. Based on this assessment, the alternatives must be compared and recommendations made on the best alternative (with attention to uncertainties and the implications of these uncertainties for the identification of the best alternative). If the proposed risk reduction / adaptation measures involve additional costs (compared to the options currently considered), the CRA should include an estimation of these costs. It should also identify who would be in charge of implementing these measures. In exceptional circumstances it may be concluded that a project is associated with so many risks, or risks that are so severe, that its prospects for success are extremely low. In such cases it may be recommended that a project does not continue further, or that it is replaced with one or more alternative projects that can deliver comparable benefits.
5) Climate Risk Management Plan	The Climate Risk Management Plan (CRMP) is a document that identifies the actions needed to implement the recommendations of the CRA study. The CRMP should clearly translate the recommendations from the CRA into an operational plan.

[30]Risks which, based on the analysis performed, are expected to remain even after the planned risk response has been adopted, as well as those that have been deliberately accepted.

	The CRMP of the project should include: • the objectives, expected results, objectively verifiable indicators, activities (mitigation/optimisation measures), and responsibilities for the implementation of those activities; • institutional arrangements for its implementation: responsibilities, role of the key actors, participation of stakeholders; • suggestions for contracts (environmental clauses: standards, potential requirement to prepare CRMP of the company) and contracting modalities (such as payments linked to results); • a monitoring and supervision plan, which outlines how risk reduction and adaptation will be measured/tracked, and identifies appropriate indicators (e.g. of vulnerability, adaptive capacity, impact of measures in terms of development outcomes) while establishing frequency of monitoring, means to gather and analyse data, reporting systems; • a response plan in case of unexpected results from the monitoring (e.g. unintended consequences, evidence that measures are not having intended impacts); • a proposed schedule for activities; • an indication of means (including personnel, technical resources, other requirements) and costs of implementing the CRMP.
6) Limitations of the CRA	The major limitations, weaknesses and uncertainties of the CRA should be explicitly underlined. Areas should be highlighted where significant knowledge and information gaps remain, and where uncertainties cannot realistically be quantified. Where projections and assessments are based on limited data, a small number of models, simulations or scenarios, this should be highlighted, and any deficiencies in representing a reasonable range of possible future scenarios should be identified. Any apparent contradictions between model results and observations should be noted. All assumptions made in the prediction and assessment of the potential climate-related risks should be detailed.
7) Conclusions on climate-related risks	This section will summarise the key results of the CRA, the recommendations (referring to the CRMP) and an assessment of the residual risks. Any additional information relevant for further economic and financial analyses or for the general formulation study should be provided. The limitations of the CRA and its key assumptions should be articulated.

BOX 14. STANDARD FORMAT FOR THE CRA REPORT

STRUCTURE OF THE REPORT

1. Executive Summary
2. Background
   - A. Project justification and purpose
   - B. Project location
   - C. Project description and associated activities
   - D. Alternatives (if any)
   - E. Relevant policy, legislative and institutional framework
3. Approach and methodology
   - A. General Approach
   - B. Tools and methods for identifying and assessing risks
   - C. Relevant Indicators
   - D. Assumptions, uncertainties and constraints
4. Studio di riferimento del rischio climatico
   - A. Current climate risk context (hazards, vulnerability, adaptive capacity)
   - B. Expected future climate risk context
5. Risk identification and assessment
   Description of indirect risks and interactions between: (i) different types of risks, and (ii) climate-related and non-climate-related stresses (additional subject headings could be formed to ensure that these aspects are not overlooked).
6. Conclusions and risk statement
   Conclusions and recommendations on actions to be taken to ensure that the climate-related risks are adequately addressed in subsequent project preparation, implementation, monitoring and evaluation phases. These conclusions and recommendations must be complete, yet concisely and clearly formulated. This section must include one of the three "risk statements" set out below:
   - the project (and any alternatives) are not associated with significant climate-related risks, provided that the measures recommended are followed through;
   - the lower risk alternative(s) identified will be associated with some significant climate-related, risks for which adequate risk reduction/adaptation measures cannot feasibly be implemented. Therefore, it is recommended to identify and assess additional alternatives or to check that the residual risks are acceptable given the expected benefits of the project;
   - each identified alternative is associated with significant and unacceptable climate-related risks, irrespective of the proposed risk reduction/adaptation and monitoring measures. Therefore, it is recommended that the project proposal be comprehensively re-worked and alternatives re-assessed).
7. Risk reduction/adaptation measures and residual risks.
   This section should provide the key points of the Climate Risk Management Plan (CRMP).

BIBLIOGRAPHICAL REFERENCES

Chapter I. Environmental Mainstreaming in Cooperation Initiatives

Swiss Agency for Development and Cooperation (SDC). '*How to Note Context Analysis in Fragile and Conflict Affected Contexts*', June 2013.

World Bank. "*Lessons from Environmental Mainstreaming: Towards Environmental Sustainability*". Washington, DC, USA, December 2010.

Brown, L. and Tomerini, D. '*Environmental Mainstreaming in Developing Countries*', Brisbane, Australia, January 2009.

Care International. '*Evicted by Climate Change: Confronting the Gendered-impact of Climate-induced Displacement*', July 2020.

European Commission. '*Integrating the Environment and Climate Change into EU International Cooperation and Development*'. Luxembourg, February 2016.

United Nations Development Programme (UNDP/UNDP). '*Mainstreaming Environment and Climate for Poverty Reduction and Sustainable Development*', November 2015.

Websites consulted:

https://ec.europa.eu/environment/eia/sea-legalcontext.htm

https://www.oecd.org/dac/environment-development/strategicenvironmentalassessment.htm

https://openknowledge.worldbank.org/handle/10986/23099

https://unece.org/DAM/env/eia/documents/SEA_CBNA/Georgia_manual_en.pdf

https://www.msp-platform.eu/practices/strategic-environmental-assessment-better-practice-guide-0

https://www.unep.org/resources/report/environmental-impact-assessment-and-strategic-environmental-assessment-towards

https://unfccc.int/gender

https://va.minambiente.it/it-IT/ps/Comunicazione/IndicazioniOperativeVIA


ITALIAN AGENCY
FOR DEVELOPMENT
COOPERATION

www.aics.gov.it

FOLLOW US ON

agenziaitalianacooperazione

@aics_it

@aics_cooperazione_it

ITALIAN AGENCY
FOR DEVELOPMENT
COOPERATION