



Gold Standard®

Climate Security & Sustainable Development

CONSULTATION

CLIMATE ADAPTATION REQUIREMENTS

Gold Standard®
Climate Security & Sustainable Development

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RESILIENT CITIES CATALYST

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INTRODUCTION

Increasing annual catastrophic losses caused by climate-related and other extreme events arise not only from increasing risk but also from poor systemic resilience (social, institutional, and economic) to cope with disruptions, failures, and extreme events. These losses highlight the growing need to build professional and management capacity to both accelerate the development of a quality adaptation project pipeline and, at the same time, to leverage climate adaptation and other streams of finance to develop broad based resilience in a multi-peril context and at a more systemic level, especially in the context of low to medium income countries.

In addition to the purpose that standards serve in providing the mechanics for aligning the design and preparation of individual projects with the requirements of finance providers, standards also can serve a broader purpose. In low-income countries, they can serve as an intermediating resource between the different actors, siloed disciplines, and institutional spheres that must coordinate efforts in building and scaling new arenas of practice. They provide a shared practice language that supports strategic alignment of objectives between the very different actors required within a new community of practice ecosystem, which typically includes public, private sector, and civil society agents.

Standards can also be designed to incentivise changes in established institutional practices, such as inefficient 'siloing' of operations and investments (including with regards to risk management), which reduces the benefits that can be gained from investments, or which impedes the use of new technologies and solutions. Finally, to support the fast-paced development of developing and under-developed countries by enabling new practice arenas, and supporting the formation of markets to scale new areas of development and investment. Standards indicate the forms of capacity needed within communities, institutions, and industries to investors, developers, and governments. In this sense, they can also provide a foundational resource for professional, political, and civic education, training, and other capacity building measures in low-income communities around the globe.

Through a new collaboration, the expertise and experience of Gold Standard in developing and managing new international sustainable development standards is brought together with the resilience, climate adaptation and capacity-building expertise of Resilient Cities Catalyst to create this new adaptation standard.

THE NEED FOR AN ADAPTATION STANDARD

Hundreds of local authorities—and surely soon to be thousands in the low- and medium-income countries—have already prepared local adaptation and resilience plans and strategies, and hundreds more have such planning underway. The scale of such planning activity has evolved over the last 10-15 years as local governments took initiative in partnership with local universities, national science institutes, climate-focused NGOs, and consultancies to act on climate perils and risks, pending national and international frameworks and commitments. Responding to these local efforts in more recent years, city networks, professional associations, charitable-funded NGO program initiatives, and niche market-based consultant services firms have grown to respond to and accelerate local action.

Today, many larger, international planning, design and engineering firms are responding to a growing volume of local and regional government request for proposals (RFPs), as well as to more recent UNFCCC's National Adaptation Plans. Within this context, there is increasingly a need in the fast-paced developing economies, for such a standard to support local authorities and planning partners, to more effectively and to rapidly translate the recommendations arising from adaptation planning into investment-worthy projects. By carefully dovetailing best practices for adaptation planning globally within a project design standard (Gold Standard for the Global Goals), this standard aims to guide both public authorities and the private sector in the development of an increasing portfolio of quality local adaptation and/or resilience projects.

Growth in local portfolios of quality public, private, and public-private projects would of course subsequently generate demand for project feasibility, technical assistance and for project funding/finance. Among the needs for technical support is the need for

project finance structuring support. Adaptation projects generally pose greater financing challenges because a substantial part of their financial justification is reduction in potential future losses, and often a lesser guarantee of reliable revenue streams. Adaptation projects often confront design and financing complexities related to the way that climate hazards translate into a wide range of different risks for different locations, assets, urban services systems, businesses, households, etc. in the project area. Quality design of adaptation projects needs to consider not only the systemic vulnerabilities arising from climate exposures, but also the adaptive capacity of communities, and resilience of technologies, materials, and products utilised in adaptation projects.

Therefore, as much as an adaptation standard can be designed to interface with jurisdiction-wide adaptation planning efforts that are upstream to specific project location, it can also be designed to facilitate project owners' preparedness to structure and recruit finance and to reliably deliver adaptive outcomes. One aspect of this preparedness arises from the multi-benefit approach taken in resilience design, which creates opportunities to leverage single projects to deliver a wider range of revenue generating and loss preventing benefits. Efforts have accelerated to increase the scale and scope of existing climate/resilience funds (including, for instance, discussions to replenish the CIFs) and to establish a range of private climate adaptation/resilience funds. The gap between available, quality pipeline and finance availability has grown in parallel.

KEY CONCEPTS AND TERM DEFINITIONS

ADAPTATION: Adaptation refers to adjustments in ecological, social, or economic systems in response to actual or expected climatic stimuli and their effects or impacts (United Nations Framework Convention on Climate Change, n.d.).

ADAPTIVE CAPACITY: It is the ability to absorb or cope with a climate hazard event or extended climate stress to which a person, party, or asset is determined sensitive.

ASSETS OR CRITICAL INFRASTRUCTURE: The physical structures, facilities, networks and other assets which provide services that are essential to the social and economic functioning of a community or society (United Nations Office Disaster Risk Reduction 2009).

BASELINE: Baseline refers to the datasets showcasing the current/present situation relating to the project, its associated systems and communities and forms the benchmark against which future progress can be assessed or compared.

CLIMATE CHANGE CONDITION: This refers to the change in the existing climatic scenario such as 'Changing Temperatures', 'Changing Precipitation', 'Rising Sea Levels', and other events.

CLIMATE SCIENCE: Climate science investigates the structure and dynamics of earth's climate system. It seeks to understand how global, regional and local climates are maintained as well as the processes by which they change over time. In doing so, it employs observations and theory from a variety of domains, including meteorology, oceanography, physics, chemistry and more (Parker 2018).

CLIMATE RISK: The potential, when the outcome is uncertain, for adverse consequences on lives, livelihoods, health, ecosystems and species, economic, social and cultural assets, services (including environmental services), and infrastructure. (IPCC). Risk is expressed as the combination of **likelihood** and **consequences** of a climate event or shock and/or of climate change stresses (e.g. damages/losses, injury/death, service interruption). In addition to climate risks resulting from physical

climate hazards, there are **transition risks**. Transition risks are risks associated with a transition to a low-carbon economy (financial, political, legal, technology) (IPCC).

DOWNSTREAM: Systems and resources that are external to the project site and/or assets that will be impacted by the project and the project's performance.

EXPOSURE: The presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected. (IPCC SRCCL, 2019). In other words, exposure refers to the inventory of elements in the area in which hazard events may occur (UNISDR), and that may be affected by the hazard event.

1. Exposure may be assessed, for example, by estimating the number of people, the value of assets, the number of critical systems (etc) in the area in which a hazard event may occur.
2. Exposure considers only whether an element is exposed to the hazard or not – it does not evaluate the type of impacts the element might suffer.

HAZARD LIKELIHOOD: The potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources. (IPCC SRCCL 2019).

1. Climate hazards can be **climate shocks** (high magnitude, low frequency such as hurricanes) or **climate stresses** (low magnitude, high frequency such as nuisance flooding).
2. Unlike other natural hazards, climate hazards are **dynamic** due to climate change. Future hazard conditions will be different from current ones.
 - a. Climate change may make climate shocks **more frequent** and/or **more extreme**.
 - b. Climate change may affect climate stresses by making regular conditions **more variable** and/or by **changing averages**.

PROJECT LIFESPAN: This term refers to the total time from the project planning phases to the implementation stage to the operations and decommissioning phases, including all intermediary steps in between.

RISK MANAGEMENT: The application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses (United Nations Office Disaster Risk Reduction 2009).

RISK PREVENTION: Reducing exposure to the hazard and therefore reducing the likelihood that the risk event will occur.

RISK MITIGATION: While not reducing the exposure and likelihood that the risk event will occur, risk mitigation measures reduce the harm and losses if the event occurs.

RISK SHARING or POOLING: Establishing mechanisms whereby a group of parties facing the same risks share or 'pool' the costs of mitigation and recovery from risk events.

RISK TRANSFER: Transferring the costs of disruption, response, and recovery to an insurer or to capital markets, whether individually or as a risk pool.

SENSITIVITY: The physical predisposition of human beings, infrastructure, and environment to be affected by a dangerous phenomenon due to lack of resistance and predisposition of society and ecosystems to suffer harm as a consequence of intrinsic and context conditions making it plausible that such systems once impacted will collapse or experience major harm and damage due to the influence of a hazard event. (IPCC SREX Ch.2)

SHOCK: Shocks are events that cause an immediate damaging impact. Covariate shocks such as natural disasters or spikes in food prices affect multiple households, communities or regions. Idiosyncratic shocks are smaller in scale - within a household, idiosyncratic shocks may include illness or death of a family member, loss of livestock or of employment.
(Government of United Kingdom 2016)

STRESS: Stresses are often longer-term trends that have slow onset impacts and undermine existing systems over time (Government of United Kingdom 2016).

UPSTREAM: Systems and resources that are external to the project site and/or asset(s) and upon which the project's performance depends.

VULNERABILITY: The propensity or predisposition to be adversely affected by a climate change shock or stress, including climate variability and extremes.

Vulnerability encompasses a variety of concepts and elements including sensitivity (or susceptibility to harm) and lack of capacity to cope and adapt. (IPCC). Vulnerability has two components:

1. **Sensitivity (Susceptibility or Fragility):** Physical predisposition of human beings, infrastructure, and environment to be affected by a dangerous phenomenon due to lack of resistance and predisposition of society and ecosystems to suffer harm as a consequence of intrinsic and context conditions making it plausible that such systems once impacted will collapse or experience major harm and damage due to the influence of a hazard event. (IPCC SREX Ch.2)
2. **Lack of Adaptive Capacity:** Limitations in access to and mobilization of the resources of the human beings and their institutions, and incapacity to anticipate, adapt, and respond in absorbing the socio-ecological and economic impact.

REQUIREMENTS AND GUIDANCE

CLIMATE ADAPTATION REQUIREMENTS

1. PROJECT DEFINITION BRIEF, TEAM FORMATION, AND QUALIFICATIONS

- 1.1 Preliminary Project Definition Brief
- 1.2 Team Qualification - Climate Adaptation Lead
- 1.3 Team Qualification - Climate Science Consultant
- 1.4 Team Qualification - Local Development Consultant
- 1.5 Data Identification, Collection and Analysis

2. CLIMATE FOCUSED STAKEHOLDER EDUCATION

- 2.1 Stakeholder Identification and Creation of Stakeholder Reference Group
- 2.2 Delivery of Climate-Science Based Educational Sessions
- 2.3 Community Engagement Plan

3. PROJECT CONCEPT DEVELOPMENT

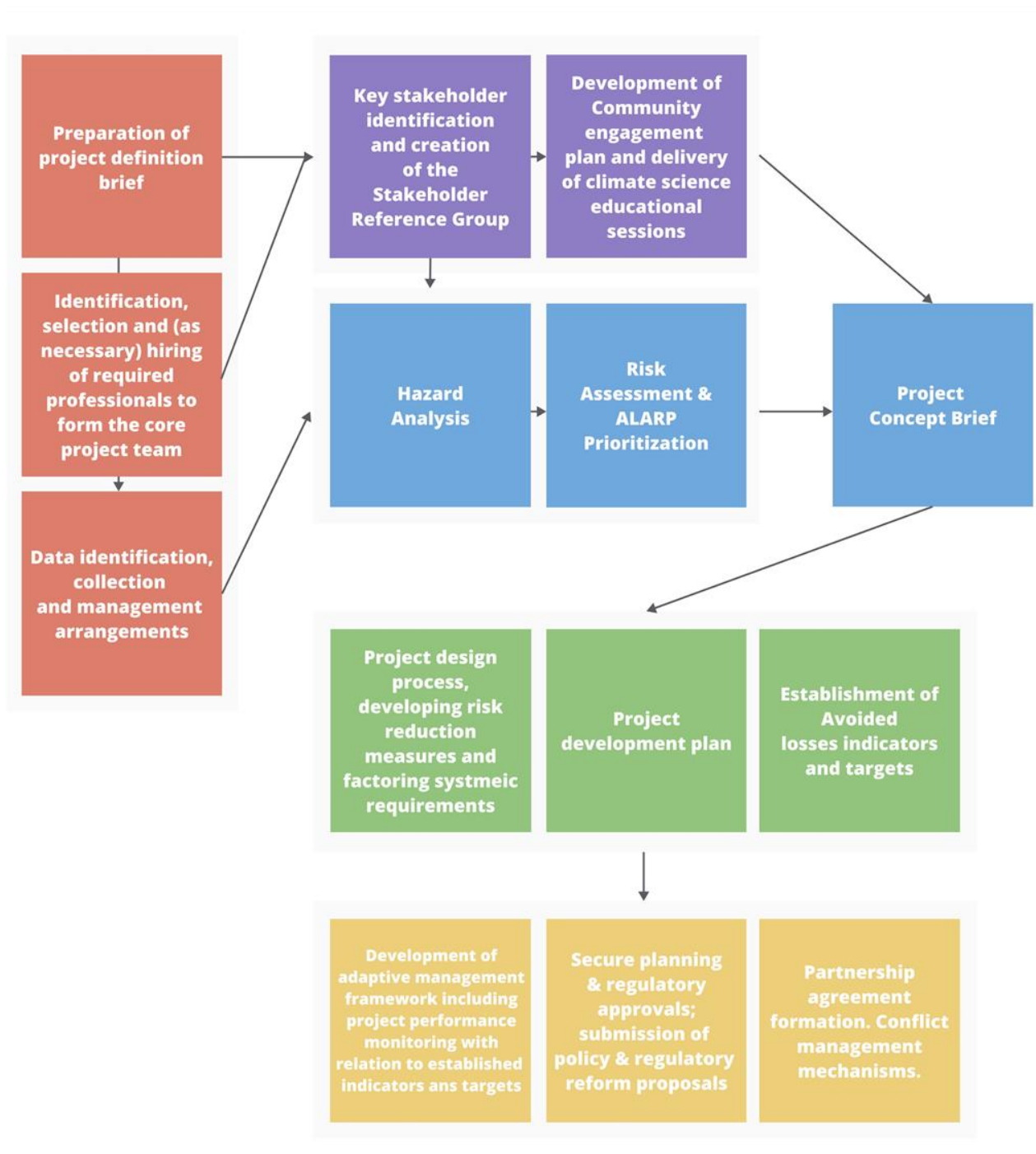
- 3.1 – 3.3 Hazard Analysis
- 3.4 – 3.9 Risk Assessment
- 3.10 Project Concept Brief

4. TECHNICAL PROJECT DESIGN & PLANNING

- 4.1 Project Design Process
- 4.2 Project Conception Meeting
- 4.3 Identification of Systemic Requirements
- 4.4 Project Development Plan
- 4.5 Risk Reduction Measures

5. PROJECT GOVERNANCE AND ADAPTIVE MANAGEMENT

- 5.1 Project Monitoring Plan
- 5.2 Development of Adaptive Management Approach
- 5.3 Cooperative and Collaborative Agreements
- 5.4 Regulatory Approval and Adoption
- 5.5 Mitigation and/or Management of Future Conflicts



1. PROJECT DESIGN BRIEF, TEAM FORMATION, AND QUALIFICATIONS

1.1 PROJECT DEFINITION BRIEF

A preliminary project definition brief should be prepared which specifies and describes the i) project goals and objectives, ii) the preliminary project boundaries including relevant maps and/or diagrams, iii) the assets, systems and resources that the project will develop and/or alter and upon which the project performance depends or that will be impacted directly or indirectly by the project, and iv) the project stakeholders. The project definition brief will also include an initial high-level 'climate importance' assessment indicating the general severity of climate hazards to the project area, site and/or assets, and the sensitivity of desired project outcomes to these hazards. The climate importance assessment (refer to Appendix A in the 'Guidance Document') will be used to guide recommendations by the verification professional regarding robustness of data and analytical approaches for the project. At the Project Review Stage the final project definition brief shall include i) description of climate hazards analysis findings related to each of the project-related assets, systems, and resources, and ii) identification and description of any other assets, systems, or parties that will be exposed to each identified hazard.

COMPLIANCE INDICATOR

NO APPLICATION/NON-COMPLIANT	COMPLIANT
A preliminary project definition brief is not prepared by the project team detailing each of the project goals and objectives, associated upstream and downstream system dependencies and impacts, key stakeholders, timelines, and preliminary high-level climate importance assessment.	A preliminary project definition brief is prepared by the project team detailing project goals and objectives, associated upstream and downstream system dependencies and impacts, key stakeholders, timelines, and preliminary high-level climate importance assessment.

REQUIREMENT 1.2: Team Qualification – Climate Adaptation Lead

The project development team has at least one dedicated professional member who will serve as the Climate Adaptation Lead for the project. The Climate Adaptation Lead will have a university degree in a field relevant to climate adaptation or will have completed professional assignments relevant to climate adaptation. Relevant university degrees include the following: architecture, urban planning, civil or environmental engineering, geoscience, emergency and disaster risk management as well as other science-related, engineering or earth sciences fields. Relevant professional experience includes any projects involving natural hazard risk assessment or mitigation through project planning and/or design in which the professional was actively engaged (leading or supporting) these aspects of the project.

REQUIREMENT 1.3: Team Qualification – Climate Science Consultant

The project development team will be advised by a Climate Science Consultant. For projects with a Low Climate Importance (Step 6 of Requirement 1.1 as described in the guidance document), the Climate Science Consultant reviews outputs of activities

related to Hazard Analysis and Risk Assessment. For projects with a Medium or High Climate Importance, the Climate Science Consultant participates in data identification collection and analytical activities related to the Hazard Analysis (refer requirements 3.1-3.3) and Risk Assessment (refer requirements 3.4-3.9) in addition to reviewing/producing the outputs. The Climate Science Consultant has a university degree in a field directly pertinent to climate change adaptation or a minimum of 5 years of professional experience working on climate change adaptation projects or research.

REQUIREMENT 1.4: Team Qualification – Local Development Champion/Indigenous Knowledge Liaison

The project development team must identify a local development champion from the project associated communities within the project boundaries, and use appropriate engagement methods to include him/her/them to be part of the core team. The local development champion must have had substantial experience working on a particular shock(s) and/or stress(es) relevant to the community(ies) affected by the project, including recognised knowledge of or access to local/indigenous knowledge about local climate conditions and events and their impacts upon affected communities.

COMPLIANCE INDICATOR FOR REQUIREMENTS 1.2 – 1.4

NO APPLICATION/NON-COMPLIANT	COMPLIANT
The project development team has not formalised arrangements for the participation, throughout the course of project development and implementation, of each of the core team member profiles described in 1.2 - 1.4.	The project development team has completed the formalisation of arrangements for the participation, throughout the course of project development and implementation, of each of the core team member profiles described in 1.2 - 1.4.

REQUIREMENT 1.5: Data Identification, Collection, and Analysis

The project team has prepared a plan to identify, collect , and analyze data sources and datasets relevant to the project, and has considered the most recent and highest quality data (e.g. highest level of geographic detail, peer reviewed science) and the most recent scientific and engineering assessments of climate change hazards, scenarios, and potential systemic effects relevant to the project site and to the wider project area. The data collection plan further describes the process to be used to collect data from local project stakeholders and relevant local professionals and managers.

COMPLIANCE INDICATOR FOR REQUIREMENT 1.5

NO APPLICATION/NON-COMPLIANT	COMPLIANT
The project development team has not prepared or provided a plan for data identification, procurement, and management, which will allow the team to conduct a thorough analysis of the site conditions and climate hazards and risks within the project boundaries under a range of alternative future climate scenarios. The data plan does not describe an approach to be used to identify, collect, and analyze data from both scientific and local stakeholder sources.	The project development team has prepared and provided a plan for data identification, procurement, and management, which will allow the team to conduct a thorough analysis of the site conditions and climate hazards and risks within the project boundaries under a range of alternative future climate scenarios. The data plan describes an approach to be used to identify, collect, and analyze data from both scientific and local stakeholder sources.

2. CLIMATE FOCUSED STAKEHOLDER EDUCATION

REQUIREMENT 2.1

The project team has identified those communities, organisations or individuals within the project boundaries, indicated in the preliminary project definition brief, that are key stakeholders in the area's development and/or most vulnerable to climate change impacts. The project team has identified key information/liaison representatives for each identified stakeholder group, including representatives of identified vulnerable groups. The identified representatives have been constituted into a project Stakeholder Reference Group with terms of reference that establish how the group's representatives will be educated, informed, and consulted by the project team on all matters that will engage local stakeholders in project development and in project implementation activities.

REQUIREMENT 2.2

The project team has completed the delivery of science-based educational sessions to the Stakeholder Reference Group about the nature of the proposed project and its associated business strategies, about climate change and climate trends, and about the physical, environmental, economic, and social impacts that these trends could have upon their region, locality, and project site. Upon completion of the educational sessions, the project team will prepare documentation of the different concerns, issues, and perspectives of the Stakeholder Reference Group members regarding the proposed project design and its associated business strategies.

REQUIREMENT 2.3

The project work program includes a plan to engage local residents, businesses, and organisations affected by the project as well as expected project beneficiaries in the collection and/or interpretation of information on local climate hazards, exposures and vulnerabilities (sensitivities and adaptive capacities)

COMPLIANCE INDICATOR FOR REQUIREMENTS 2.1 – 2.3

NO APPLICATION/NON-COMPLIANT	COMPLIANT
<p>The project team has not completed and provided documented evidence of completion of one or more of the following:</p> <ol style="list-style-type: none"> 1. Identification of key local development and climate-vulnerable stakeholders and formation of a Stakeholder Reference Group that represents those stakeholders, with mutually agreed terms of reference for project-wide participation. 2. Provision of climate based educational sessions to the Stakeholder Reference Group, including documentation of concerns, issues, and perspectives of Stakeholder Reference Group members regarding the project. 3. A plan to engage local residents, businesses, and organisations affected by the project (including project beneficiaries) in the collection and/or interpretation of information on local climate hazards, exposures and vulnerabilities. 	<p>The project team has completed and provided documented evidence of completion of all of the following:</p> <ol style="list-style-type: none"> 1. Identification of key local development and climate-vulnerable stakeholders and formation of a Stakeholder Reference Group that represents those stakeholders, with mutually agreed terms of reference for project-wide participation. 2. Provision of climate based educational sessions to the Stakeholder Reference Group, including presentation of the proposed project and documentation of concerns, issues, and perspectives of Stakeholder Reference Group members regarding the project. 3. A plan to engage local residents, businesses, and organisations affected by the project (including project beneficiaries) in the collection and/or interpretation of information on local climate hazards, exposures and vulnerabilities.

3. PROJECT CONCEPT DEVELOPMENT

HAZARD ANALYSIS, REQUIREMENTS 3.1 – 3.3

REQUIREMENT 3.1

A Hazard Analysis Report and preliminary project definition brief shall be submitted to the verification professional prepared by the project team, in consultation with the Stakeholder Reference Group and climate science consultant. It should describe the potential impact of each potential climate shock event and climate stress condition to which the project area/site, the project, and project stakeholders are or are expected to be exposed during the useful life of the project investment, implementation, and operations. For each relevant climate event, stress and condition, and based on available climate science models and data, including the actual record of historical and recent climatic events, the Hazard Analysis Report will consider the impacts of different climate scenarios upon hazard probabilities and consequences.

REQUIREMENT 3.2

The Hazard Analysis Report will include preliminary identification and analysis of other, non-climate natural disaster hazards that would directly affect the built and natural assets (including habitat areas and agricultural lands) and infrastructures within the project boundaries.

REQUIREMENT 3.3

The hazards analysis has identified upstream and off-site hazards that could hinder access to resources inputs, infrastructures, technologies, and other territories necessary (i.e system-wide requirements) to achieve and maintain desired project objectives, goals, benefits and performance standards.

COMPLIANCE INDICATOR FOR REQUIREMENTS 3.1 – 3.3

NO APPLICATION/NON-COMPLIANT	COMPLIANT
The project development team has not submitted a Hazard Analysis Report detailing current and future climate shock and stress scenarios and also identifying non-climate hazards over the useful life of the project investment. If a Hazard Analysis Report is provided, the Report conducts hazard analysis not using the methodology provided in the guidance document of these requirements	The project development team has submitted a Hazard Analysis Report detailing current and future climate shock and stress scenarios and also identifying non-climate hazards over the useful life of the project investment. The Report conducts hazard analysis using the methodology provided in the guidance document of these requirements

PROJECT RISK ASSESSMENT, REQUIREMENTS 3.4 – 3.8

REQUIREMENT 3.4

The project team together with the Stakeholder Reference Group has completed a comprehensive risk assessment for the project site/area and of the project's systemic requirements as identified in 3.3. The risk assessment used a process and/or methodology provided in the guidance document and/or endorsed by 1) a United Nations, multilateral development assistance, or bilateral development assistance entity, 2) of a national or international professional association or specialist organisation for planning, hazard management, or risk management professionals, or 3) of a program of a regional or local government associations that focuses on climate change.

REQUIREMENT 3.5

In preparing the climate risk assessment the science-based hazard analysis, and related hazard and climate scenarios data have been made fully available to and have

been utilised by the persons or entity(ies) engaged in preparing the comprehensive risk assessment for the project.

REQUIREMENT 3.6

The climate risk assessment has evaluated the exposures of people, built and natural assets (including habitat areas and agricultural lands), infrastructures, enterprises and productive activities, critical social facilities to each hazard identified in the Hazard Analysis Report under the selected range of climate hazards and scenarios. To accurately assess exposures, the Stakeholder Reference Group has been actively engaged in defining or 'downscaling' the climate scenarios to the level of the project site and context, drawing upon the knowledge of directly affected stakeholders.

REQUIREMENT 3.7

As part of the risk assessment, the project team together with the Stakeholder Reference Group have completed a climate vulnerability assessment that considers the sensitivity and adaptive capacities of the identified exposed residents, species and habitats, and enterprises and livelihoods located in the project site or area. The vulnerability assessment has directly engaged the identified most vulnerable groups in the assessment process to understand how the identified hazard events could affect the community under the different considered scenarios.

REQUIREMENT 3.8

The project risk assessment has considered the ways in which other non-climate natural disaster events (identified in the hazards analysis), when coincident with climate-related stresses and shocks, could interact to increase harm and losses.

NO APPLICATION/NON-COMPLIANT	COMPLIANT
<p>The project development team has not completed a comprehensive risk assessment and/or has not provided the findings and conclusions in a Climate Risk Assessment Report that meets all specified requirements.</p> <p>These requirements are:</p> <ul style="list-style-type: none"> a) The risk assessment process was undertaken with the participation and contributions of the Stakeholder Reference Group. b) The risk assessment was undertaken with reference to the information and conclusions documented in the Hazard Analysis Report. c) The risk assessment used a process and/or methodology provided in the guidance document d) The Risk Assessment Report evaluates both the exposures (including likelihood) to climate hazards analyzed in the Hazard Analysis Report and the related vulnerabilities (including sensitivities and adaptive capacities) of all significantly exposed demographic groups, communities, assets and infrastructures, natural habitats and species within the project boundaries to these exposures. e) The Risk Assessment Report evaluates exposures and vulnerabilities to climate hazards under each of the climate scenarios considered in the hazard analysis. f) The Risk Assessment Report considers risks arising from non-climate related hazards which when interacting with climate related shock and stresses could increase harm and losses. 	<p>The project development team has completed a comprehensive risk assessment and/or has provided the findings and conclusions in a Climate Risk Assessment Report that meets all specified requirements. These requirements are:</p> <ul style="list-style-type: none"> a) The risk assessment process was undertaken with the participation and contributions of the Stakeholder Reference Group. b) The risk assessment was undertaken with reference to the information and conclusions documented in the Hazard Analysis Report. c) The risk assessment used a process and/or methodology provided in the guidance document d) The Risk Assessment Report evaluates both the exposures (including likelihood) to climate hazards analyzed in the Hazard Analysis Report and the related vulnerabilities (including sensitivities and adaptive capacities) of all significantly exposed demographic groups, communities, assets and infrastructures, natural habitats and species within the project boundaries to these exposures. e) The Risk Assessment Report evaluates exposures and vulnerabilities to climate hazards under each of the climate scenarios considered in the hazard analysis. f) The Risk Assessment Report considers risks arising from non-climate related hazards which when interacting with climate related shock and stresses could increase harm and losses.

PROJECT DESIGN BRIEF, REQUIREMENTS 3.9 – 3.10

REQUIREMENT 3.9

The project team together with the Stakeholder Reference Group has drawn upon the conclusions of the risk assessment to determine those risks that need to be given priority consideration in the design of the project. For these prioritised risks, targets for risk reduction and/or mitigation outcomes achieved through implementation of the project have been defined by the project team in consultation with the Stakeholder Reference Group. For all other climate risks that were evaluated in the risk assessment, risk management objectives to be considered during the project design process have been defined.

REQUIREMENT 3.10

A project design brief has been prepared and shall include the final project definition brief (as per 1.1) and the following content areas:

- 3.10.1 The historical context for the project, project stakeholders and community capacities and livelihoods;
- 3.10.2 Description of the climate hazards and risks confronting the project site and/or area, including hazard analysis and risk assessment documentation; Include description of the most climate vulnerable groups associated with climate risks in the project area and of the adaptive capacities of these groups and of other relevant stakeholders and institutions;
- 3.10.3 Description of the proposed project objectives and performance targets with reference to the climate risks of site or project area's, and their potential interaction with other site risks and the risks associated with relevant off-site systems;
- 3.10.4 Description of additional social and environmental co-benefits being pursued in the context of the project;

- 3.10.5 Description of the facilitating and hindering conditions in the project enabling environment for successful achievement of the project objectives and performance targets;
- 3.10.6 Description of contributions that project implementation could make to implementation of the hazard management strategies or plans, statutory plans, investment plans, and policies/regulations of relevant jurisdictions.

COMPLIANCE INDICATOR FOR REQUIREMENTS 3.9 – 3.10

NO APPLICATION/NON-COMPLIANT	COMPLIANT
The project development team has not completed and submitted a Project Design Brief that includes the final project definition brief and has drawn upon the conclusions of the risk assessment along with identification of the prioritized risks to be considered in the design. The report should also present the information specified in topics 3.10.1 through 3.10.6 of the requirement 3.10.	The project development team has completed and submitted a Project Design Brief that includes the final project definition brief and has drawn upon the conclusions of the risk assessment along with identification of the prioritized risks to be considered in the design. The report should also present the information specified in topics 3.10.1 through 3.10.6 of the requirement 3.10.

4. TECHNICAL PROJECT DESIGN AND PLANNING REQUIREMENTS

REQUIREMENT 4.1

A project design process has been implemented by the project design team with reference to the project design brief. The project design process has used a deliberative method to consider alternative means to address the identified intolerable and critical risks, at the minimum, facing each of the at-risk parties or assets as identified in the risk assessment, through measures that include risk prevention, risk mitigation and vulnerability reduction, and/or the pooling, spreading, or market transfer of risk.

REQUIREMENT 4.2

The stakeholder communities and organisations that have been involved in the hazard analysis and risk assessment process have been invited to send representatives to participate in project consultations, workshops, and charrettes (aka project conception meetings) held to develop alternative project concepts to prioritized climate risks. Evidence can be provided demonstrating how stakeholder consultations and engagement have contributed to the project concepts.

REQUIREMENT 4.3

In preparing the project design, the project team together with stakeholders and technical advisors has identified the systemic requirements -- including materials and equipment, technologies, supporting infrastructure, utility, and services systems -- for the project's ability to deliver and maintain designed functions, risk reduction and other targeted benefits under the range of climate scenarios selected in 3.1.

The project design incorporates features, measures, and mechanisms to maintain function and performance under extraordinary or "shock" conditions to which the project site or asset is exposed, and so that if there is a failure, potential cascading

impacts are minimized.

REQUIREMENT 4.4

The project team has prepared a project development plan that further specifies the approval requirements, stakeholder engagement requirements, timelines and resource requirements for further technical development of each of the measures included in the project design. The project plan includes a review of relevant local, sub-national, and national level policies, regulations, operations standards, development rights and other approval requirements for full implementation of the project design. Where necessary to enable project delivery, proposals for amendments or reforms to governmental plans, regulations, codes, standards, or procedures have been prepared to enable project delivery as per project objectives as well as to strengthen the enabling environment in the jurisdiction for other climate adaptation projects.

REQUIREMENT 4.5

The project team has calculated the total reduction in risk that it expects to achieve through implementation of the project design, including identification of the expected avoided losses associated with reductions in harm and loss climate impacts during the specified period of project function, and under the considered climate scenarios. The project team shall make best efforts to quantify the estimated avoidance of losses in monetary terms over the period of project function.

NO APPLICATION/NON-COMPLIANT	COMPLIANT
<p>The project development team has not demonstrated that the process developed and implemented to consider alternative means to address, at a minimum, the prioritised intolerable and critical risks for each of the related at-risk parties and assets:</p> <ol style="list-style-type: none"> 1. Has included consideration and evaluation of measures including risk prevention, risk mitigation and vulnerability reduction, and/or the pooling, spreading, or market transfer of risk to reduce risk for each of the at-risk parties and assets 2. Has identified the systemic requirements -- including materials and equipment, technologies, supporting infrastructure, utility, and services systems--necessary for the project-related assets, infrastructures, and services to continue operations under shock conditions, such that if there is a failure under extreme conditions the potential cascading impacts are minimized. 3. Has engaged stakeholder representatives who participated in the hazard analysis and risk assessment processes as participants in the project design consultations, workshops, and charrettes (aka project conception meetings). 4. Made evident how the participating stakeholders contributed to the final project concepts. 	<p>The project development team has demonstrated that the process developed and implemented to consider alternative means to address, at a minimum, the prioritised intolerable and critical risks for each of the related at-risk parties and assets:</p> <ol style="list-style-type: none"> 1. Has included consideration and evaluation of measures including risk prevention, risk mitigation and vulnerability reduction, and/or the pooling, spreading, or market transfer of risk to reduce risk for each of the at-risk parties and assets 2. Has identified the systemic requirements -- including materials and equipment, technologies, supporting infrastructure, utility, and services systems--necessary for the project-related assets, infrastructures, and services to continue operations under shock conditions, such that if there is a failure under extreme conditions the potential cascading impacts are minimized. 3. Has engaged stakeholder representatives who participated in the hazard analysis and risk assessment processes as participants in the project design consultations, workshops, and charrettes (aka project conception meetings). 4. Made evident how the participating stakeholders contributed to the final project concepts.

COMPLIANCE INDICATOR FOR REQUIREMENTS 4.4

NO APPLICATION/NON-COMPLIANT	COMPLIANT
<p>The project development team has not provided a project development plan that specifies the approval requirements, stakeholder engagement requirements, timelines and resource requirements for further technical development and implementation of each of the measures included in the project design, including evidence of a review and, where necessary, proposals for amendments or reforms of relevant local, sub-national, and national level policies, regulations, operations standards, development rights and other approval requirements for full implementation of the project design.</p>	<p>The project development team has provided a project development plan that specifies the approval requirements, stakeholder engagement requirements, timelines and resource requirements for further technical development and implementation of each of the measures included in the project design, including evidence of a review and, where necessary, proposals for amendments or reforms of relevant local, sub-national, and national level policies, regulations, operations standards, development rights and other approval requirements for full implementation of the project design.</p>

COMPLIANCE INDICATOR FOR REQUIREMENT 4.5

NO APPLICATION/NON-COMPLIANT	COMPLIANT
<p>The project development team has not provided documentation of measurable targets and indicators for the estimated avoidance of harm and losses arising from project implementation for each risk to be addressed and for each related at-risk party, across the project's operational lifespan, relative to the No Adaptation Project Condition (baseline).</p>	<p>The project development team has provided documentation of measurable targets and indicators for the estimated avoidance of harm and losses arising from project implementation for each risk to be addressed and for each related at-risk party, across the project's operational lifespan, relative to the No Adaptation Project Condition (baseline).</p>

5. PROJECT GOVERNANCE AND ADAPTIVE MANAGEMENT

REQUIREMENT 5.1

A project monitoring plan has been prepared and agreed upon by the project owners, implementation partners, and investors. The plan establishes a minimally bi-annual monitoring and review process, and defines the qualitative and quantitative indicators to be monitored. Indicators are included to monitor i) effectiveness of each of the incorporated risk management measures, ii) for delivery of project co-benefits for intended project users/beneficiaries as included in the project design, and iii) for delivery of the project's harm and loss avoidance projections.

REQUIREMENT 5.2

The project plan incorporates an adaptive management approach in which trigger conditions (based upon specified indicator 'trigger' values) are established that instigate review of options for adapting aspects of the project to ensure achievement targeted harms and losses avoidance under emerging conditions and scenarios, including as necessary the re-convening of project owners, and/or users/stakeholders, and/or investors to make such changes.

REQUIREMENT 5.3

The project team has identified and initiated the cooperative or collaborative agreements required for delivery of all aspects of the project plan and design.

REQUIREMENT 5.4

Proposals for amendments or reforms to policies, plans, regulations, and standards that are required to enable project delivery as per project objectives (as per Requirement 4.4) have been submitted for formal decision by and/or have been

adopted by relevant local, regional, and national governing and regulatory bodies. project owners, and/or users/stakeholders, and/or investors to make such changes.

REQUIREMENT 5.5

The project delivery plans include mechanisms for addressing or otherwise managing potential future conflicts related to challenges associated with lack of achievement of the targeted avoided losses, taking into consideration the uncertainties regarding emerging climate and other non-climate natural disaster risk scenarios that could affect project performance.

COMPLIANCE INDICATOR FOR REQUIREMENTS 5.1 – 5.2

NO APPLICATION/NON-COMPLIANT	COMPLIANT
<p>The project development team has not developed and provided a project monitoring plan that establishes a minimally bi-annual monitoring and review process, and that defines the qualitative and quantitative indicators and trigger values to be monitored to evaluate i) the effectiveness of each of the incorporated risk management measures, ii) the delivery of project co-benefits for intended project users/beneficiaries, iii) the delivery of the project's avoided harms and losses projections, and iv) the need to augment and adapt risk reduction measures arising from changing climate and non-climate scenarios.</p>	<p>The project development team has developed and provided a project monitoring plan that establishes a minimally bi-annual monitoring and review process, and that defines the qualitative and quantitative indicators and trigger values to be monitored to evaluate i) the effectiveness of each of the incorporated risk management measures, ii) the delivery of project co-benefits for intended project users/beneficiaries, iii) the delivery of the project's avoided harms and losses projections, and iv) the need to augment and adapt risk reduction measures arising from changing climate and non-climate scenarios.</p>

COMPLIANCE INDICATOR FOR REQUIREMENTS 5.3 – 5.4

NO APPLICATION/NON-COMPLIANT	COMPLIANT
<p>The project development team has not provided documentation of agreements, approvals, or of required submissions to obtain approvals from government entities, property owners, any other parties required for the delivery of all aspects of the project plan and design. In the instance that amendments or reforms are required to policies, plans, regulations, and standards to enable project delivery, the project development team has not yet submitted to the relevant policy or regulatory authorities.</p>	<p>The project development team has provided documentation of agreements, approvals, or of required submissions to obtain approvals from government entities, property owners, any other parties required for the delivery of all aspects of the project plan and design. In the instance that amendments or reforms are required to policies, plans, regulations, and standards to enable project delivery, the project development team has submitted to the relevant policy or regulatory authorities.</p>

COMPLIANCE INDICATOR FOR REQUIREMENTS 5.5

NO APPLICATION/NON-COMPLIANT	COMPLIANT
<p>The project owners and project development team have not ensured that agreements and contracts related to the project with investors, affected asset and business owners, project implementation partners, and project beneficiaries contain clauses that:</p> <ol style="list-style-type: none"> 1. State that they cannot predict or control how climate change trends and impacts will manifest within the project boundaries, and therefore cannot guarantee that the climate risk management measures designed into the project will prove adequate to achieve the targeted levels of harm and loss avoidance. 2. Waive the project owner, project developer, and investors of liability for climate change related harms and losses. 3. Contain provisions for efficiently resolving any conflicts that may arise pertaining to implementation of the project as designed and associated with any future harms or losses due to climate change. 	<p>The project owners and project development team have ensured that agreements and contracts related to the project with investors, affected asset and business owners, project implementation partners, and project beneficiaries contain clauses that:</p> <ol style="list-style-type: none"> 1. State that they cannot predict or control how climate change trends and impacts will manifest within the project boundaries, and therefore cannot guarantee that the climate risk management measures designed into the project will prove adequate to achieve the targeted levels of harm and loss avoidance. 2. Waive the project owner, project developer, and investors of liability for climate change related harms and losses. 3. Contain provisions for efficiently resolving any conflicts that may arise pertaining to implementation of the project as designed and associated with any future harms or losses due to climate change.

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