Climate Change Adaptation and Social Inclusion Screening and Quantification Tool for
PT Indonesia Infrastructure Finance
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AMDAL</td>
<td>Analisis Mengenai Dampak Lingkungan / Environmental impact assessment</td>
</tr>
<tr>
<td>ASESMR</td>
<td>Annual Social and Environmental Safeguard Monitoring Report</td>
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<tr>
<td>BOD-IC</td>
<td>Board of Directors – Investment Committee</td>
</tr>
<tr>
<td>CEO</td>
<td>Chief executive officer</td>
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<td>CREST</td>
<td>Climate Resilience and Environmental Sustainability Technical Advisory fund</td>
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<tr>
<td>CSR</td>
<td>Corporate social responsibility</td>
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<tr>
<td>DRM</td>
<td>Disaster risk management</td>
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<tr>
<td>ESG</td>
<td>Environmental, Social, and Governance</td>
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<td>ESIA</td>
<td>Environmental and social impact assessment</td>
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<tr>
<td>GAP</td>
<td>Gender action plan</td>
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<td>GDP</td>
<td>Gross domestic product</td>
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<td>GHG</td>
<td>Greenhouse gas</td>
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<td>IDC</td>
<td>Interest and depreciation costs)</td>
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<td>IFC</td>
<td>International Finance Corporation</td>
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<td>IIF</td>
<td>Indonesia Infrastructure Finance</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<td>OHS</td>
<td>Occupational health and safety</td>
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<tr>
<td>PAM</td>
<td>Project Appraisal Memorandum</td>
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<td>PAP</td>
<td>Project affected people</td>
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<td>PID</td>
<td>Project Information Document</td>
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<tr>
<td>PPI</td>
<td>Private participation in infrastructure</td>
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<td>PPP</td>
<td>Public private partnership</td>
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<td>RAP</td>
<td>Resettlement action plan</td>
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<tr>
<td>RPJMN</td>
<td>Rencana Pembangunan Jangka Menengah Nasional / National Medium-Term Development Plan</td>
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<tr>
<td>SDG</td>
<td>Sustainable development goals</td>
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<td>SEDD</td>
<td>Social environmental due diligence</td>
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<td>SEMS</td>
<td>Social and Environmental Management System</td>
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<tr>
<td>SEP</td>
<td>Social and environmental principles</td>
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<tr>
<td>SLB</td>
<td>Sustainability linked bonds</td>
</tr>
<tr>
<td>UKL</td>
<td>Upaya Pengelolaan Lingkungan / Environmental management procedures</td>
</tr>
<tr>
<td>UPL</td>
<td>Upaya Pemantauan Lingkungan / Environmental monitoring procedures</td>
</tr>
<tr>
<td>WBG</td>
<td>World Bank Group</td>
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1 Introduction

1.1 Background

Indonesia is highly vulnerable to the impacts of climate change, including projected sea-level rises, changing precipitation patterns, intense tropical cyclones, and storm surges. Major urban centers include Jakarta, Bandung, Medan, and Semarang, which are home to over 48 million Indonesians or almost 18% of its population. If climate change is not adequately addressed, the situation across the country would undoubtedly worsen. The country is also vulnerable to the combined impacts of climate change and rapid urbanization. While rapid economic growth has led to a significant reduction in poverty in recent decades, with the poverty rate halving from 24% in 1999 to 9.78% in 2020\(^1\), the high population density in hazard prone areas, coupled with a strong dependence on the country’s natural resource base, makes Indonesia vulnerable to both projected climate variability and climate change, with the country’s urban poor being most vulnerable. This is largely due to the concentration of urban poor in city peripheries, where infrastructure supply is limited and of low-quality.

The Government of Indonesia is strongly committed to combating climate change and, as such, has made a number of commitments to strengthen its climate change adaptation and mitigation priorities. As a step towards this, Indonesia ratified the Paris Agreement in 2016 and submitted its nationally determined contributions (NDCs). Through Presidential Regulation No. 61/2011, concerning the National Action Plan for Greenhouse Gas Emission Reduction (RAN-GRK), Indonesia has set an emission reduction target of 26%, compared to business-as-usual, with domestic efforts, or up to 41% with international support under the reference emission level. In support of these efforts, the Indonesian Government has promulgated several legal and policy instruments, including the National Action Plan on Greenhouse Gas Emissions Reduction as stipulated in Presidential Regulation (PERPRES) No. 61/2011 and Greenhouse Gas (GHG) inventory through PERPRES No. 71/2011.

The Government of Indonesia has placed social protection at the heart of its inclusive growth strategy, with the national medium-term development plan (Rencana Pembangunan Jangka Menengah Nasional, RPJMN) for 2020–2024 emphasizing the need to (i) redesign existing social protection schemes and integrate social assistance subsidies to achieve better program complementarity, (ii) achieve faster distribution of social assistance, better targeting and outcomes, and (iii) improve beneficiary welfare. The role of social protection in resilience-building is also recognized in the RPJMN 2020–2024, and the government has initiated a process to develop an adaptive social protection road map.

In this context it becomes imperative to catalyze infrastructure investments that foster E&S sustainability, with a focus on gender protection and equality, particularly in, vulnerable communities.

The private sector (including investors and lenders) will need to play an important role in bridging the technical adaptation and financing gap with interventions such as (i) investment in the R&D development of climate friendly projects, (ii) investment in climate friendly technologies, (iii) creating working standards for climate adaptation baselines and (iv) financing the capex for adherence to climate and social resilience and responsiveness of projects.

To help further the government’s strategic priorities, PT Indonesia Infrastructure Finance (IIF), a leading non-bank private infrastructure financing institution, is committed to strengthening the application of international best practices in climate risk and social inclusion standards (including Gender, Cultural Heritage, Biodiversity, Ecosystem Services, and Indigenous Peoples). IIF has already incorporated eight social and environmental principles (SEPs) based on the International Finance Corporation’s (IFC) E&S principles (referred to as performance standards by IFC) in its social and environmental management system (SEMS).

\(^1\) Climate Risk Country Profile: Indonesia, developed by the World Bank Group (WBG) and the Asian Development Bank (ADB)
The eight SEPs of IIF are:
The eight SEPs of IIF are:

SEP 1: Social and Social and Environmental Management System (SEMS),
SEP 2: Labour and Working Conditions,
SEP 3: Pollution Prevention and Abatement and Climate Change,
SEP 4: Community Health, Safety and Security,
SEP 5: Land Acquisition and Involuntary Resettlement,
SEP 6: Biodiversity Conservation and Natural Resource Management,
SEP 7: Indigenous People, and
SEP 8: Cultural Property and Heritage.

The eight performance standards of IFC are:
The eight performance standards of IFC are:

Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts,
Performance Standard 2: Labour and Working Conditions,
Performance Standard 3: Resource Efficiency and Pollution Prevention,
Performance Standard 4: Community Health, Safety, and Security,
Performance Standard 5: Land Acquisition and Involuntary Resettlement,
Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources,
Performance Standard 7: Indigenous Peoples, and
Performance Standard 8: Cultural Heritage.

IIF’s SEMS aims to integrate the various social and environmental aspects of projects to help IIF and its clients identify and mitigate potential social and environmental risks and impacts and to ensure that the projects are fully aligned with sustainability goals.

Understanding and quantifying the benefits of implementing climate risk and social inclusion measures will help to emphasize the importance of implementing robust climate risk and social inclusion guidelines in Indonesia. It will also help IIF become a benchmark for other financial institutions and policymakers to also adopt more robust environmental and social (E&S) management frameworks.

IIF has already established a project evaluation and selection process for all the projects it funds. According to this process, projects are evaluated based on their commercial viability, as well as E&S risks. To help identify and quantify the benefits of applying IIF’s SEMS, IIF conducted a “Value Capture Study” in 2021 that provided a methodology to assess (at both a qualitative and quantitative level), the incremental benefits of applying IIF’s E&S principles to 6 projects from 3 different sectors that were funded by IIF. However, due to the limited availability of data, the assessment could only be conducted on a limited range of risk mitigations that were mostly qualitative in nature. Following this study, IIF felt that it was important to develop this work further, particularly through the quantification of the impact of social and
climate investments, including the related cost-benefits and opportunity costs of adding elements of IIF’s SEMS in the project design and development.

Therefore, as a follow-up and to build on the existing findings from the previous study, IIF asked for technical support from the WBG to develop the study further by (i) extending the assessment at a more upstream level of the project preparation process and (ii) expanding the range of projects and related E&S impacts to further reduce implementation risks.

Through this technical support, the WBG’s Public-Private Infrastructure Advisory Facility (PPIAF)’s - Climate Resilience and Environmental Sustainability Technical Advisory fund (CREST), supported the development of an E&S risk screening and quantification database tool that is based on the WBG’s Climate and Gender Toolkits for Public Private Partnership (PPPs) in Infrastructure.

1.2 Objective of the Assignment

The objective of this assignment was to (i) strengthen IIF’s capacity to develop a strategy and methodology to screen climate-smart projects and quantify the impacts and benefits of the application of climate risk, gender, and other social inclusion considerations such as Cultural Heritage, Biodiversity, Ecosystem Services, and Indigenous peoples from a project perspective and (ii) help support and advance Indonesia’s sustainability and climate commitments (i.e., Sustainable Development Goals and Nationally Determined Contribution).

1.3 Activities Undertaken

The table below shows the key activities undertaken during the course of the engagement.

Table 1-1 Activities undertaken during the engagement periods

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Activities undertaken</th>
<th>Output</th>
<th>Delivered</th>
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<tbody>
<tr>
<td>1.</td>
<td><strong>Inception stage:</strong> In this stage, the CRISIL team refined the approach and methodology, execution strategy, mobilized the team and conducted a preliminary literature review.</td>
<td>• Inception Report</td>
<td>Jun 2022</td>
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<tr>
<td>2.</td>
<td><strong>Literature review:</strong> This engagement started by undertaking research on Indonesia’s climatic situation and key E&amp;S risks using various secondary sources and studies to develop a holistic understanding of the context and issues associated with climate and social risks in the country. A detailed comparison and assessment of the national E&amp;S framework and IIF’s Social and Environmental Management System was conducted. Based on this comparative assessment, the additionality of IIF’s SEMS compared to the national E&amp;S requirements was identified. Simultaneously, an assessment of existing internationally developed tools for the identification and quantification of E&amp;S risks was also conducted.</td>
<td>• Long List Tool Report</td>
<td>Dec 2023</td>
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<td>• Revised Long List Tool Report</td>
<td>Feb 2023</td>
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<td></td>
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<td>• Stage 1 Tool (Screening Tool)</td>
<td>Jan 2023</td>
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<td><strong>Review of IIF’s portfolio and shortlisting of 20 projects:</strong> 90 infrastructure projects in IIF’s portfolio (56 projects in the</td>
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<td>S. No.</td>
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<td></td>
<td>Lending portfolio and 34 in the pipeline) were reviewed, covering status (planning, construction, and O&amp;M), cost, location, nature and size of the projects, financing arrangement and availability of data etc. This helped in understanding what kind of data is available and how it is collected by IIF. This understanding was considered while preparing the design of the tool. As a step towards the selection of projects for the high-level briefs and business cases, only the 56 projects in the lending portfolio were considered, as the additional E&amp;S benefits could only be quantified for those projects where IIF’s SEMS has been applied. Further, out of these 56 projects, 33 projects in the operational stage were filtered out. The remaining 33 projects were discussed with IIF, and these projects were further assessed based on the following parameters to arrive at a list of 20 projects: • Higher preference to be given to projects with A &amp; B (High and Medium Risk) ratings with varied climate and social risks. • Projects with higher strategic importance. • Projects to be from all the major sectors. • Projects with higher data availability. • Higher preference for those projects with a larger number of end users. Development of Tool design framework: Based on the extensive literature review on climate and social risks in Indonesia, assessment of IIF’s operational manual and national E&amp;S Framework, assessment of existing internationally developed tools and analysis of the documents of IIF’s projects, overall, the tool framework (Stage 1 and Stage 2 Tool), its application, principles and limitations were defined. Development of Stage 1 Tool (Screening Tool): With the objective of assessing a project’s responsiveness to climate and social aspects, the Stage 1 Tool, was designed to assess strategic suitability and institutional capacity, climate and biodiversity responsiveness and social (local community, gender inclusivity, cultural heritage, and indigenous people) responsiveness of the project.</td>
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<td>High level Brief Report - Interim Report I</td>
<td>Mar 2023</td>
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<td>3.</td>
<td><strong>Shortlisting of 12 projects for high level briefs</strong>: 20 projects shortlisted in the previous stage, were then evaluated through the Interim Stage 1 Tool to further shortlist 12 projects. Based on the score from applying the Stage 1 Tool and further discussion with</td>
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<td>S. No.</td>
<td>Activities undertaken</td>
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<td>1</td>
<td>the World Bank and IIF teams on understanding the ongoing issues (if any) in the 20 projects, 12 projects (including 5 PPP projects) were identified for the preparation of high-level briefs.</td>
<td>• Revisited high level Brief Report - Interim Report I</td>
<td>Jun 2023</td>
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<td><strong>Prepared high level briefs for 12 projects:</strong> High-level briefs were prepared that covered project introduction, status, its alignment with national development priorities, assessment of the project proponent’s capacity and included a social, environmental and climate risk and responsiveness assessment. Each project was passed through the Stage 1 Tool to arrive at a climate and E&amp;S responsiveness score.</td>
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<td><strong>Finalisation of four projects for business cases:</strong> The 12 projects were discussed in detail with the IIF S&amp;E team during a consultation visit to Indonesia (20th - 24th Feb 2022) to select four projects for developing detailed business cases. The parameters considered for shortlisting the four projects included sectoral variation, PPP/public procurement, strategic importance, availability of data with IIF, ease of coordinating with the project proponent for the collation of additional data and number of SEPs triggered for the given project. The shortlisted four projects were 1) Bulk water supply system project, Bandar Lampung, 2) Cikopo – 2 mini hydro power plant, Cikopo, West Java, 3) DKI Jakarta inner toll road and 4) Makassar – Parepare railway, South Sulawesi.</td>
<td>• Visit to Jakarta for consultation with IIF</td>
<td>20th - 24th Feb 2022</td>
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<td>3</td>
<td><strong>Implementation of the Stage 2 Tool (Benefit Quantification Tool):</strong> The stage 2 Tool is a customized tool designed to evaluate the economic benefits generated in the project through the application of the SEMS framework. The idea behind the development of the tool is to quantify the additional benefits generated in terms of the application of the SEMS framework for handling and mitigating the various issues and risks related to environmental, social, gender, biodiversity, indigenous people and cultural heritage. The tool also assesses the issues pertaining to each of the variables.</td>
<td>• Stage 2 Tool (Benefit Quantification Tool)</td>
<td>Apr 2023</td>
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<td>4</td>
<td><strong>In person consultation with IIF in Indonesia:</strong> The consultant team visited Jakarta and had detailed discussions on the Stage 1 Tool and received feedback on the same from IIF’s S&amp;E team. There was also a detailed discussion on the four shortlisted projects and the design framework for the Stage 2 Tool.</td>
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<td>5</td>
<td><strong>Capacity building workshop:</strong> The World Bank team organized a capacity building workshop and the consultant team,</td>
<td>• Capacity building workshop</td>
<td>22nd &amp; 23rd May 2023 at</td>
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<td>consisting of CRISIL from India and IKUPI from Indonesia, served as the knowledge partners. The workshop included participants from various organizations, including IIF (CEO and team members from the Investment, Finance, Advisory, and S&amp;E teams), Ministry of Finance, World Bank team, and the consultant team (CRISIL and IKUPI). Approximately forty participants attended the workshop, which aimed to discuss and explore the deliverables of the engagement. The workshop had two main areas of focus. The first part focused on providing training to IIF’s officials on the functioning and usage of the Stage 1 Tool (assesses the level of S&amp;E responsiveness of a project) and Stage 2 Tool (quantifies climate risk and social inclusion (including Gender, Cultural Heritage, Biodiversity, Indigenous Peoples)). The second part of the workshop was focused more on a knowledge exchange pertaining to the application of Indonesia’s NDC monitoring tools such as the National Registry System, Monitoring, Reporting and Verification (MRV) systems, Social and Environmental Safeguards along with program and policy level interventions undertaken for achievement of NDCs. Cases of other countries such as Costa Rica and India were benchmarked with respect to Indonesia. Further, recommendations on the improvement of Indonesia’s pathway in terms of policies, programmes, monitoring with respect to NDCs were discussed in detail.</td>
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<td>the Dharmawangsa Hotel, Jakarta, Indonesia.</td>
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7. **Consultation with proponents of four projects:** Detailed discussions were undertaken with proponents on the projects, covering project components, cost and financing sources, associated E&S risks, E&S mitigation measures implemented and associated costs, IIF’s S&E compliance, E&S management and monitoring mechanism, challenges faced during the implementation and operation stage etc. **Consultation with proponents of four projects** 24th to 26th May, 2023

8. **Recommendations on IIF’s current social and environmental safeguard practice:** In the process of assessing IIF’s SEMS framework, some gaps in the current E&S framework (including S&E coverage and compliance requirements) and monitoring and documentation systems were identified and, based on these gaps, recommendations were provided to further enhance IIF’s S&E safeguard implementation framework. **Recommendations on IIF’s current social and environmental safeguard practice** - Interim Report II June 2023

9. **Developing business cases for four projects:** For the four finalised projects, a detailed E&S benefit quantification exercised was conducted. The development of the business case was anchored on a comprehensive total project economic

**Business Case Report** Aug 2023
### 1.4 Contents of the Report

Given that much of the work undertaken in this assignment involves proprietary and confidential information with respect to IIF’s clients and projects, the purpose of this report is limited to providing (i) an overview of the approach and methodology used to develop the screening and quantification tool and (ii) recommendations that can help IIF strengthen its current S&E framework to better identify and mitigate project related S&E risks.

This report consists of three chapters:

- **Chapter 1 - Introduction**: This chapter explains the background and objectives of the assignment.

- **Chapter 2 - Tool design framework**: This chapter describes the overall design framework of the Stage 1 Tool and Stage 2 Tool, including tool application, substance, principles, types of questions and responses and list of questions.

- **Chapter 3 - Recommendations on IIF’s existing S&E framework**: This chapter provides recommendations on strengthening IIF’s E&S framework including S&E coverage and compliance requirements and monitoring and documentation systems.

In addition, there are three annexes that provide further information on the tools, including manuals for operating the Stage 1 and Stage 2 tools.
2 Tool Design Framework

IIF applies the eight social and environmental principles (SEPs) of the SEMS that go beyond the requirements of the Analisis Mengenai Analisis Dampak Lingkungan / Environmental impact assessment - Upaya Pemantauan Lingkungan (UPL)/ Environmental monitoring procedures – Upaya Pengelolaan Lingkungan (UKL)/ Environmental management procedures, to assist clients in identifying potential risks and impacts associated with the development of an infrastructure project. The intention of applying these SEPS is to minimize E&S risks and maximize the overall sustainability of the project.

This technical assistance is aimed at assisting and improving the capacity of IIF to assess the E&S responsiveness of projects and estimate the E&S benefits of these projects in monetary terms arising through the application of IIF’s SEMS.

For this, a two-stage tool was prepared which has the following features:

- Simple and user friendly
- Clear visual outputs
- Takes into account the availability (or lack) of data
- Does not manipulate scoring in the absence of data
- Objective and close ended questions (limiting scope for personal judgements/views)
- Flexibility to make changes as and when IIF’s priority changes/ES technical capacity improves
- Easy interpretation of results

In the following sections of this chapter, the framework of the two-stage tool is explained, along with its application, principles and list of questions.

2.1 Screening and Quantification Tool framework

The Screening and Quantification Tool has two stages. In the first stage, the tool assesses the project’s responsiveness to climate and social aspects i.e., climate, biodiversity, local community, gender inclusive, cultural heritage, and indigenous people. In the second stage, the tool quantifies the benefits of the aforementioned climate and social aspects.

Figure 2-1 Stages of screening and quantification tool
Both the portfolio and pipeline projects can be tested through the Stage 1 screening tool, which will provide an overall picture of the level of responsiveness the subject project has, as well as an indication of those areas where improvements/actions are required to help maximize climate and social benefit generation post implementation.

The Stage 2 tool is only relevant to those portfolio projects (especially implemented projects) in which climate and social benefits can be quantified. Portfolio projects can skip Stage 1 and directly pass through to the Stage 2 screening.

2.1.1 Stage 1 Tool Application

The tool can be deployed at the three stages of the project life cycle as shown in Figure 2-2. Interim screening for Stage 1 is to be done at the pre-approval stage. The objective of the screening at this stage is to assess the responsiveness of a project in terms of climate and social aspects. The outputs of this stage will help to identify gaps and areas of improvement by the project proponent and supports the resubmission of the project proposal to address identified gaps. The output of this stage would aid IIF’s Board of Directors – Investment Committee (BOD-IC) in decision making on whether to approve the project to proceed further to the appraisal stage or not. Screening at the approval stage is to screen a project for the 2nd time to review the revised responsiveness of the project. The objective of screening at this stage is to screen the project once again to check whether the score of the project has been improved based on the improvements/suggestions provided at the preapproval stage. It will also provide feedback on the project’s responsiveness to the BOD-IC for final decision making to provide a financing facility to the project. The output of this stage will be to highlight those areas identified for improvement which could form part of loan covenants for ensuring better compliance. Finally, the objective of the screening at the post approval stage is to review the continued responsiveness of the project through assessing/ monitoring/ supervising, audit S&E compliance conditions and implementation of the Corrective Action Plan.

Figure 2-2 Tool application
2.2 Stage 1 Tool: Screening Tool

The Screening Tool is an excel based tool which assists users in the preliminary screening of a project to check the responsiveness of a project to social, cultural and climate aspects. The tool can also help identify those projects that could have the potential to be further analysed for quantification of the benefits with respect to various climatic, social, and other aspects. The key features of the Stage 1 Tool are as follows:

- **Identifies areas for improvement**: The tool enables users to identify key areas of improvements in the next stage of development for shortlisted projects.
- **Allows for limited data**: The tool includes both qualitative and quantitative variables. Therefore, it would be effective even for projects with limited data.
- **Pre-calibrated tool**: This is a pre-calibrated excel based tool that does not require an advanced level of technical knowledge for operating the tool.
- **Structured in a question & answer format**: The user is required to provide responses to simple questions based on available project related information. Every response is scored and there is a weightage that determines the overall project score.
- **Qualitative and quantitative assessment**: The tool uses a combination of qualitative and quantitative inputs to evaluate projects and assess their responsiveness to climate and social aspects, as well as to further identify gaps and areas of improvement by project.
- **Offers flexibility to customize**: The admin sheet in the tool allows the tool to be customizable and a user can change any variable (including weightages) as required.

2.2.1 Substance of stage 1 screening

The objective of Stage 1 of the tool is to assess a project’s responsiveness to climate and social aspects. For this stage, there are three parameters:

- Strategic suitability and institutional capacity,
- Climate and biodiversity risk assessment, and
- Social risk assessment.

These parameters are then further divided into sub parameters. The first parameter on **Strategic suitability and institutional capacity**, assesses whether the project aligns with national priorities, including international actions on climate change such as Nationally Determined Contributions (NDC), National Adaptation Plans (NAPs),

---

2 Stage 2 of the tool focuses on the quantification of the climate and social benefits of IIF’s projects. The approach for benefit quantification (stage 2 of the tool) is discussed in chapter 5 of the report.
aspects of the Paris Agreement, Sustainable Development Goals (SDGs), Climate Action Plan, RPJMN, National Climate Mitigation Plan, National Disaster Risk Management (DRM) plan, Sendai Framework, and local/provincial DRM policies. The second and third parameters of the tool assess the project’s impact and responsiveness towards climate and social aspects. The following figure shows the parameters and sub-parameters with proposed weights for Stage 1 of the tool.

Figure 2-4 Parameters and sub-parameters with proposed weightages for Stage 1 of the tool

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Sub-parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic suitability &amp; Institutional capacity (30%)</td>
<td>National policy &amp; development priorities (60%)</td>
</tr>
<tr>
<td></td>
<td>Project proponent’s capacity – climate &amp; social risk management (40%)</td>
</tr>
<tr>
<td>Climate &amp; biodiversity risk &amp; mitigation assessment (30%)</td>
<td>Climate (70%)</td>
</tr>
<tr>
<td></td>
<td>Resilience (30%)</td>
</tr>
<tr>
<td></td>
<td>Mitigation (16%)</td>
</tr>
<tr>
<td></td>
<td>Adaptation (25%)</td>
</tr>
<tr>
<td></td>
<td>Biodiversity (30%)</td>
</tr>
<tr>
<td></td>
<td>Risks &amp; inclusiveness in assessment (16%)</td>
</tr>
<tr>
<td></td>
<td>Mitigation plan (16%)</td>
</tr>
<tr>
<td>Social (PAPs) (25%)</td>
<td>Quantum of risk (5%)</td>
</tr>
<tr>
<td></td>
<td>Social risk mitigation plan &amp; adherence (5%)</td>
</tr>
<tr>
<td></td>
<td>Social inclusiveness during implementation (5%)</td>
</tr>
<tr>
<td>Gender (25%)</td>
<td>Applicability of risk (5%)</td>
</tr>
<tr>
<td></td>
<td>Mechanisms/ framework for gender-based risks mitigation &amp; inclusiveness (20%)</td>
</tr>
<tr>
<td>Indigenous people (25%)</td>
<td>Applicability of risk (5%)</td>
</tr>
<tr>
<td></td>
<td>Inclusiveness in project design (10%)</td>
</tr>
<tr>
<td></td>
<td>Indigenous people risks &amp; mitigation plan (10%)</td>
</tr>
<tr>
<td>Cultural heritage (25%)</td>
<td>Applicability of risk (5%)</td>
</tr>
<tr>
<td></td>
<td>Cultural heritage risks, inclusiveness &amp; mitigation (20%)</td>
</tr>
</tbody>
</table>

While assigning the weights to each of the parameters and sub-parameters, more weight has been provided to those aspects that are reviewed and monitored by IIF through the SEMS framework, as compared to the national E&S framework of AMDAL / UKL/UPL.

The climate component has a 70% weightage, while biodiversity has a 30% weightage out of an overall Climate & biodiversity risk and mitigation assessment parameter weightage of 30%. Since Indonesia is one of most climate and disaster impacted countries in terms of economic loss, infrastructure disruption and number of people impacted, climate resilience and adaptation measures become very crucial for any project and hence a higher weightage has been given to these parameters. In the case of Social risk and mitigation assessment, there are 4 components i.e., project affected people (PAP), gender, indigenous people and cultural heritage, each having an equal weightage of 25%.
2.2.2 Types of questions, responses and their interpretation for Stage 1 of the tool

Types of Questions

Table 2-1 Type of questions for Stage 1 of Tool

<table>
<thead>
<tr>
<th>Category of questions</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>General questions</td>
<td>Project, Cost, Sector, Name of proponent, Location, SEMS categorization etc.</td>
</tr>
<tr>
<td>Qualitative questions</td>
<td>Questions / statements that a user needs to respond to by answering yes, no, uncertain, or not applicable</td>
</tr>
<tr>
<td>Quantitative questions</td>
<td>These assess the magnitude of risk in terms of quantities e.g., number of persons affected by the project</td>
</tr>
<tr>
<td>Decision tree triggers</td>
<td>Checks if a risk applies to a project and, if so, it triggers qualitative and quantitative questions (applies to the 8 sub-parameters)</td>
</tr>
<tr>
<td>Deal breakers</td>
<td>Some features that are crucial for success of the project can be assigned a higher weightage and/or given deal breaker status (approx. 10% of questions are deal breakers) e.g., a deal breaker can be triggered if the project is not gender responsive</td>
</tr>
</tbody>
</table>

Responses to Questions

Depending on the user responses, questions are populated in the parameter sheets. All questions in the parameter sheets are assigned predefined scores by the tool. The following table summarizes the answer options and scores used in the tool.

Table 2-2 Answer Options for Stage 1 Tool

<table>
<thead>
<tr>
<th>Answer options</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes- is assigned a score of 3. This indicates that the user agrees with the question statement</td>
<td></td>
</tr>
<tr>
<td>No- is assigned a score of 0. This indicates that the user disagrees with the question statement</td>
<td></td>
</tr>
<tr>
<td>Uncertain- is assigned a score of 1 While some data and analysis may be available for this question, the user is not able to provide a definite NO nor a definite YES</td>
<td></td>
</tr>
<tr>
<td>N/A- is assigned a score of 0 N/A implies that the question does not apply to the project</td>
<td></td>
</tr>
</tbody>
</table>

Re-distribution of weights and score allocation

- The tool checks for the user responses that are marked N/A
- Weights for questions that are selected N/A get re-distributed automatically
- The associated score is multiplied with the question weights to arrive at the question wise weighted score
- The question wise weighted score is on a scale of five.
Score Constraining

Given the element of subjectivity involved in the model, it is necessary to build in various constraints to keep the score in check in extreme situations. To avoid manipulation and inefficiencies of scoring of sub-parameters, the sub-parameter score is checked for various conditions such as:

- Are too many questions being marked uncertain?
- Is any question that has a major weight in the sub parameter portfolio being answered in the negative?
- Is any question that has a major weight in the sub parameter portfolio being marked as not applicable?

If any such conditions get triggered, the sub parameter score gets constrained to a ‘weak’ or ‘moderately weak’ score depending on the condition getting triggered.

Figure 3-2-5 Screening algorithm, computation flow and customization

2.2.3 Scoring of projects

At this stage of the tool, questions and algorithm are structured in a way that projects with the lowest S&E risks will get the highest score, while projects with the highest S&E risks with no mitigation measures will get the lowest score. In other words, as the level of risks decreases and the level of mitigation measures increases, the scoring gets higher and as the level of risks increases and the level of mitigation measures decreases, the scoring becomes lower.

2.2.4 List of statements for Stage 1 Tool

Based on the literature review, an assessment of IIF’s projects and extensive discussions with the World Bank and IIF’s S&E team, the following is the list of proposed questions for Stage 1 of the tool. These questions have been formulated to assess a project’s overall responsiveness to climate and social aspects.
### Table 2-3 List of statements for Stage 1 of Tool

<table>
<thead>
<tr>
<th>Category</th>
<th>Sub Parameters</th>
<th>Questions/ Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
<td>Project Name</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Proponent (company) Name</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Project Code</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Project Category</td>
<td>Project status - Pipeline / Portfolio</td>
</tr>
<tr>
<td></td>
<td>Current Status</td>
<td>If pipeline then, preapproval stage/approval stage 1 (PAM approval) / approval stage 2 (signing of legal document)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If portfolio then, Construction, O&amp;M</td>
</tr>
<tr>
<td></td>
<td>Sector/Sub Sector</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Project Capital Cost (IDR million)</td>
<td>-</td>
</tr>
<tr>
<td><strong>Disaster Risks and Vulnerability</strong></td>
<td>Location Risk (BNBP disaster risk index 2021)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Project Specific Risk</td>
<td>Are there any material risks and vulnerabilities inherent to the project?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project address the risks identified above through (1) design/physical structural components of infrastructure investment; (2) auxiliary infrastructure; and/or (3) Operations and Maintenance plans for the project?</td>
</tr>
<tr>
<td></td>
<td>Environmental Risk as per the SEMS</td>
<td>-</td>
</tr>
<tr>
<td><strong>Type of Project</strong></td>
<td>PPP / Non-PPP project</td>
<td>Is it a PPP or a non-PPP project?</td>
</tr>
<tr>
<td><strong>Strategic Suitability</strong></td>
<td>National policy and development priorities (18%)</td>
<td>Is this a priority sector under Nationally Determined Contributions (NDC) / National Adaptation Plans (NAPs)/Aspects of Paris Agreement?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does project's scope align with the framework of Sustainable Development Goals (SDG)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is the project identified under a province level Climate Action Plan?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is it a strategic project under the RPJMN?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is this a priority sector under the national climate mitigation plan/Disaster Risk Management international policies like the Sendai Framework and local/provincial DRM policies?</td>
</tr>
<tr>
<td><strong>Project Proponent's Capacity</strong></td>
<td>Project proponent's capacity - climate, and social risk management (12%)</td>
<td>Has the project proponent in the past developed any mitigation project or project with climate adaptation and social inclusivity?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project proponent disclose emergency management plans (e.g., evacuations, fire drills, flood preparedness etc.)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project proponent disclose Environmental, Social, and Governance (ESG) parameters under their operations in annual reports or other documents?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project proponent have a policy for providing equal employment opportunity?</td>
</tr>
<tr>
<td>Category</td>
<td>Sub Parameters</td>
<td>Questions/ Projects</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-----------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Has the project proponent achieved any green building certification, undertaken any training or certification on climate change adaptation and/or Disaster Risk Management?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project lead or someone in the project/company have capacity (experience or certification) to implement any climate-related activities? (e.g., ISO14064 on quantifying, validating, and verifying organization's carbon footprint for implementer and auditor, or any ISO14000 family Environmental Management System)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In the case of a PPP, does the government and proponent have equitably apportioned risk responsibilities, balancing Force Majeure clauses and with responsibilities for likely impacts of climate change?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Has the project proponent availed any green financing, climate financing, carbon credits for project?</td>
</tr>
<tr>
<td>Climate and Biodiversity Risk assessment</td>
<td>Relevance</td>
<td>Has a climate risk and vulnerability assessment been undertaken for the project?</td>
</tr>
<tr>
<td>(30%)</td>
<td>Resilience</td>
<td>Does the project design include measures to reduce the negative effects of climate risks and vulnerabilities identified as part of the assessment?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is the underlying infrastructure designed to be climate smart?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project cause or exacerbate climate hazards, risks and/or vulnerability?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project involve usage of nature-based solutions to reduce the climate risks?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project have identified Key Performance Indicators to track resilience building measures?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project's O&amp;M phase include the measures identified in the climatic risk assessment?</td>
</tr>
<tr>
<td></td>
<td>Adaptation</td>
<td>Does the project have disaster policy, evacuation plans, management plans in case of any natural hazard over the project lifecycle?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project have access to early warning systems and emergency management plans to adapt against identified hazards?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project promote circular economy approaches and energy efficiency approaches (such as water, waste recycling etc.)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project have any climate insurance in place?</td>
</tr>
<tr>
<td></td>
<td>Mitigation plan</td>
<td>Does the project design include measures to reduce the GHG emissions?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project design include measures to reduce the air pollution?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Can the project be impacted by GHG emissions, and are there any plans are in place to modulate GHG and/or carbon loading?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project have identified Key Performance Indicators to track the mitigation measures?</td>
</tr>
<tr>
<td>Category</td>
<td>Sub Parameters</td>
<td>Questions/ Projects</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project operations periodically review the climate risks and adapt the mitigation measures based on the changing climatic conditions?</td>
</tr>
<tr>
<td></td>
<td>Biodiversity risks and inclusiveness in assessment</td>
<td>Will the project potentially impact any native, endangered, ethnospecies or protected terrestrial and aquatic flora?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Will the project potentially impact any native, endangered, ethnospecies or protected terrestrial and aquatic fauna?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Has a biodiversity risk assessment been undertaken for the project?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is the project area adjacent to or within any environmentally sensitive areas (mangroves, biosphere, protected forest, river catchment, secondary forest etc.) that is impacted by the project?</td>
</tr>
<tr>
<td></td>
<td>Mitigation plan</td>
<td>Are there any prevention plans/ecological preservation measures in place to manage the risks associated with the flora?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is there any prevention plan in place to manage the risks associated with the fauna?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Are any steps being taken to protect the environmental sensitive area?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is the plan to maintain the biodiversity area accepted/approved by the Government?</td>
</tr>
<tr>
<td>Social Risk assessment (40%)</td>
<td>Applicability of Risk</td>
<td>Does the project have any adverse impact (displacement / livelihood loss) on households?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is voluntary or involuntary land acquisition required for the project?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Has a detailed social risk assessment been undertaken for the project?</td>
</tr>
<tr>
<td></td>
<td>Local community risks (10%)</td>
<td>Number of Households displaced/ impacted?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of women displaced/ impacted?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of economic activities (industry, shops, markets, farming etc.) getting impacted?</td>
</tr>
<tr>
<td></td>
<td>Quantum of social risk</td>
<td>Number of direct and indirect workers getting impacted?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is there a proper mechanism defined by legislation or the project company to provide fair compensation to the households being displaced?</td>
</tr>
<tr>
<td></td>
<td>Social risk mitigation plan and adherence</td>
<td>Is there any specific mechanism developed to provide an alternative piece of comparable land in lieu or compensation for the land coming under acquisition for the project development?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is there any process to compensate and/or provide other economic opportunities to replace those lost?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is there a fair and accessible mechanism defined to address the grievance of the people affected through land acquisition?</td>
</tr>
<tr>
<td></td>
<td>Social inclusiveness</td>
<td>Is there any plan in place to consult with stakeholders?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Will PAPs be employed in the implementation of the project?</td>
</tr>
<tr>
<td>Category</td>
<td>Sub Parameters</td>
<td>Questions/ Projects</td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Gender Based risks</strong></td>
<td>during implementation - Adaptation</td>
<td>Are there any additional activities planned by the project proponent under corporate social responsibilities for the PAP such as social and economic resilience, projects to tackle local climate risk etc.?</td>
</tr>
<tr>
<td><strong>Gender Based risks</strong></td>
<td>Applicability of Risk</td>
<td>Has the project proponent undertaken an assessment to evaluate the impact of the project on women?</td>
</tr>
<tr>
<td></td>
<td>Has the project expose the women to gender-based risks?</td>
<td>Does the project expose the women to gender-based risks?</td>
</tr>
<tr>
<td></td>
<td>Mechanisms/ framework for gender-based risks mitigation and inclusiveness</td>
<td>Is there any plan to address identified gender risks/any potential gender-based violence during the project life cycle?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Have women provided inputs during the consultation process conducted throughout project design?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is there any mechanism or framework adopted for women endowments (health, education, and social protection) and women’s ownership and asset control?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Does the project proponent/project provide trainings to women for acquiring skills that may help improve their economic condition?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is there a plan for women to benefit from all the positive outcomes that the project may generate?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is there a separate grievance mechanism for women?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Has the project created facilities/infrastructure keeping women requirements/needs in mind?</td>
</tr>
<tr>
<td><strong>Indigenous People</strong></td>
<td>Applicability of Risk</td>
<td>Does the project adversely affect indigenous people?</td>
</tr>
<tr>
<td></td>
<td>Inclusiveness in project design</td>
<td>Is the indigenous group on or near the project site registered or formally acknowledged by the state?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of indigenous people impacted?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of indigenous women impacted?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Are indigenous people required to be displaced or resettled?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Number of economic activities of indigenous people (industry, shops, markets, farming etc.) being impacted?</td>
</tr>
<tr>
<td></td>
<td>Indigenous People risks mitigation plan</td>
<td>Are the principles of Free Prior and Informed Consent mutually agreed by the proponent and the indigenous people community?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is there any plan to maintain the culture and harmony of the Indigenous people?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is there a plan to provide for alternative housing and livelihood facilities?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Is there a fair and accessible mechanism defined to address the grievance of the affected indigenous people?</td>
</tr>
<tr>
<td><strong>Cultural Heritage</strong></td>
<td>Applicability of Risk</td>
<td>Are there any cultural heritage sites impacted due to the project?</td>
</tr>
<tr>
<td></td>
<td>Cultural heritage</td>
<td>Has the local community been consulted to better understand the social and spiritual value of the site?</td>
</tr>
</tbody>
</table>
Is there any conservation plan to maintain the existing physical attributes of the heritage site?

Are there any processes in place, if any new cultural heritage site or cultural artifacts are discovered during the project construction?

Source: CRISIL analysis

Please refer to Annex 1 for a brief manual on the use of the Stage 1 Tool

2.3 Stage 2 Tool: Benefit Quantification Tool

The Stage 2 Tool (Benefit Quantification Tool) for the portfolio projects is a customized tool designed to evaluate the economic benefits generated by a project through the application of IIF’s SEMS framework. The idea behind the development of this tool is to quantify the benefits generated in terms of the application of IIF’s SEMS framework for identifying and mitigating the various issues and risks related to environmental, social, gender, biodiversity, indigenous people and cultural heritage.

This tool can also be used as an aid to identify which projects have higher associated environmental and social risks and the various compliances measures that need to followed to address and mitigate these risks in line with IIF’S SEMS framework. This tool also helps to understand the overall costs incurred with the mitigation of these risks and the benefits arising.

The Stage 2 Tool will not only help to quantify the incremental benefits of the portfolio projects, but the outputs of the tool will also help the user to rank the projects in terms of higher benefit generation at the portfolio level. This tool can also be used to monitor the benefits of the portfolio of projects on an ongoing basis.

The key features of the Stage 2 Tool are as follows:

- It is an excel based pre-calibrated tool which quantifies the benefits arising through the application of the SEMS framework (climatic, social, gender, biodiversity, Indigenous people and cultural heritage) in the project.

- The tool is mainly based on the use of quantitative variables based on data from various reports including environmental and social impact assessment reports, annual operational reports, Corrective Action Plans and initial business case assessments and is structured in a Q&A format.

- The tool has been designed to offer flexibility of customization. The Admin sheet, Macro economic variables sheet and Data analysis sheet allows the tool to be customized through changing/updating any variable as required.

The annualized project benefit estimated in the Stage 2 Tool is based on the aggregate of the annual economic benefits from each of the indicators categorized under SEP.

Using this tool, the user can compare projects of different sizes, costs, sectors to understand which projects have generated the highest economic benefits. However, it is important to note that this tool cannot substantiate the information provided by the user and hence the accuracy of the analysis is directly dependent upon the accuracy of the user inputs.

2.3.1 Principles of Stage 2 Tool

There are four underlying principles on which each of the benefit quantification computations within the Stage 2 Tool is based:
• The first principle is the **avoidance of time delays** in project construction or operation & maintenance thereby leading to savings in money. This principle suggests that through the application of a robust social and environmental management system, social and environmental issues/disputes are reduced or avoided in the project. This in turn reduces or avoids time delays in the construction or the operation and maintenance of the project. The avoidance of time delays leads to monetary savings.

• The second principle is about the **avoidance of penalties and the costs of damage**. This principle is based on the understanding that those projects that comply with IIF’s SEMS are more likely to avoid or experience less penalties/damage costs. The monetary benefits arising out of avoidance/reduction of penalty and damage costs are quantified as benefits in the tool.

• The third principle is about the **additional benefits that are accrued** by application of the SEMS framework. For example, it measures the return on capital deployed for implementing health and safety measures for the labor and employees which lead to the reduction/prevention of accidents and the costs associated with them. The additional benefits accrued in this case arise from the avoidance or reduction in the number of mishaps/accidents.

• The final principle is the **generation of additional income** for the people in the community and employees by providing income generating and employment opportunities in the project which in turn contribute to the overall gross domestic product (GDP) at the national level.
Figure 2-6: Principles of Stage 2 Tool

1. Avoidance of delays & savings in terms of time & money
   - Avoidance of occurrence of event due to application of SEMS
   - Construction delays avoided
   - Macroeconomics variable [mv] – Absolute value for monetary saving
   - Project data [pd] – Number of events avoided
   - Macroeconomics variables [mv] = Monetary benefits

2. Damage cost/ Avoidance of penalty
   - Application of SEMS
   - Benefit – Social and Environment – Damage Cost if SEMS not applied
   - Penalty for causing environmental and social issue
   - Macroeconomics variable [mv] – value for monetary saving (For Project/ Per capita)
   - Project data [pd] – Savings to Water/ Air pollution etc. in terms of Quantity
   - Monetary benefits

3. Additional social, environmental & economic benefits
   - Return on income/ ratio various events, Preservation/ Conservation/ OHS
   - Macroeconomic variable [mv] – Absolute value for additional benefits
   - Project data [Pd] – Money invested, and Area served
   - Monetary benefits

4. Income generation
   - Benefit to the people in terms of income
   - Macroeconomics variable [mv] – Absolute value (Land/ Income – Men and Women)
   - Project data [Pd] – Affected people (Type)
   - Monetary benefits

Source: CRISIL analysis
### 2.3.2 List of focus areas for the Stage 2 Tool

The following table lists the areas related to the various environmental and social related mitigation measures implemented in the projects and which are considered for quantification.

#### Table 2-4: List of focus areas for the Stage 2 Tool

<table>
<thead>
<tr>
<th>SEP</th>
<th>Avoidance of delays and savings</th>
<th>Avoidance of penalty and damage cost</th>
<th>Additional benefits</th>
<th>Income generated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SEP 1 - Strategic Interventions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting up of S&amp;E Team for implementation, monitoring and evaluation of SEPs</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reduced violations and adverse impacts to environment due to better monitoring regime</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoided E&amp;S issues due to IIF’s compliance achievement</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usage of nature-based solutions in the project</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SEP 2 - Social Factors (Labor and Working Conditions)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved labor relationships due to grievance redressal mechanism</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Through direct and indirect office jobs created for women within the project influence area</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Through direct and indirect office jobs created for men within the project influence area</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Provision of livelihood support/ jobs to construction laborers (women)</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Provision of livelihood support/ jobs to construction laborers (men)</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td><strong>Sep 3 – Climatic Factors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste reduced, avoided, reused and recycled annually</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hazardous waste treated annually</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GHG emissions reduced annually</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEP</td>
<td>Avoidance of delays and savings</td>
<td>Avoidance of penalty and damage cost</td>
<td>Additional benefits</td>
<td>Income generated</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------</td>
<td>-------------------------------------</td>
<td>---------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Water recycled and reused annually</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Air pollution reduced annually</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise pollution reduced annually</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water pollution avoided due to treatment of wastewater</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Energy saved annually</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**SEP 4 - Safety of People**

- Reduced labor occupational health and safety hazards due to employment of occupational health and safety (OHS) measures in the project
- Savings due to employed traffic management plan in the project
- Savings due to employed security management plan in the project

**SEP 5 - Social Factors (Land Acquisition and Involuntary Resettlement)**

- Ease of land acquisition and avoidance of project delay due to community engagement and stakeholder consultations
- Corporate social responsibility (CSR) engagements for social development/betterment of affected community and PAP - Faster dispute resolution and approval

**SEP 6 - Biodiversity conservation and natural resource management**

- Flora saved or preserved
- Fauna saved or preserved
- Ecosystem improvements
- Due to avoidance of invasive alien species
- Carbon absorption potential of biodiversity area

**SEP 7 - Indigenous people**
<table>
<thead>
<tr>
<th>SEP</th>
<th>Avoidance of delays and savings</th>
<th>Avoidance of penalty and damage cost</th>
<th>Additional benefits</th>
<th>Income generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through direct and indirect jobs created for women (Indigenous people)</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Through direct and indirect jobs created for men (Indigenous people)</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Conflicts avoidance due to consultation with stakeholders (Indigenous people)</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Through conservation of Indigenous people's cultural heritage</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Social return to IP in terms of sentimental and emotional wellbeing through the conservation of cultural heritage</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

**SEP 8 - Cultural heritage**

<table>
<thead>
<tr>
<th></th>
<th>Avoidance of delays and savings</th>
<th>Avoidance of penalty and damage cost</th>
<th>Additional benefits</th>
<th>Income generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Through direct and indirect jobs created for women due to cultural heritage</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Through direct and indirect jobs created for men due to cultural heritage</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Through increased visitors to the cultural heritage site due to its preservation</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Social return in terms of sentimental and emotional wellbeing of people depending on the cost of conservation of cultural heritage</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

*Source: IIF and CRISIL Analysis*

*Please refer to Annex 2 for a brief manual on the use of the Stage 2 Tool*
3 Recommendations to Strengthen IIF’s existing S&E Management System

The robust implementation of environmental and social (E&S) safeguards in infrastructure projects in Indonesia has a critical role to play in safeguarding society against the potential adverse environmental and societal impacts generated by the massive infrastructure development program being implemented by the Government of Indonesia. Infrastructure projects in Indonesia have to comply with various environmental and social assessment regulations. Based on the assessed risk level of a project, different levels of assessment are required to be undertaken that are called:

- Amdal
- UKL
- UPL

These frameworks assess social and environmental impacts arising from the project and lay down the basis for developing mitigation action plans to reduce those impacts.

In Indonesia, most of the financial institutions, particularly banks, usually undertake the development of the Amdal/UKL/UPL E&S assessment while doing their credit appraisal process. The common practice is for banks to approach the Amdal/UKL/UPL E&S assessment more as a box ticking exercise and typically do not perform any additional E&S assessment. In addition, banks generally rely on the monitoring conducted by the Ministry of Environment and Forestry (MoEF) with respect to the implementation of mitigation actions proposed in the various contractual documents.

3.1 IIF’s E&S System

IIF aims to position itself as the leading financial institution in Indonesia with respect to the application and enforcement of environmental and social safeguards. In this context, IIF embeds eight IFC performance standards3 on Environmental and Social Sustainability, into their S&E framework called IIF Social & Environmental Principles (IIF SEP). The IIF SEP is beyond the scope of Amdal/UKL/UPL, thereby providing a more comprehensive way of undertaking assessments on S&E aspects covered in the 8 principles. Through the IIF SEP framework/ Social and Environmental Management System (SEMS), IIF not only undertakes a robust assessment on potential S&E risks and impacts by applying higher S&E standards on projects, but also monitors compliance with stringent mitigation plans that are put in place by IIF to address the risks identified.

3.2 Gaps in IIF’s Existing E&S System

While IIF’s SEMS exceeds national requirements, there are areas for improvement in IIF’s current approach which can further enhance IIF’s S&E safeguard implementation.

Some of the key gaps or areas for improvement in the current SEMS are highlighted below:

- Gender inclusivity evaluation is not fully detailed: There is no specific SEP on gender inclusivity in the current framework. Therefore, a separate SEP or separate section in IIF’s SEP 5 (Land Acquisition and Involuntary Resettlement) on mainstreaming gender in infrastructure projects is recommended to be added. IIF’s current SEMS

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with regard to gender, mentions gender inclusivity during the consultation process and as part of the grievance redressal mechanism. However, while IIF’s current SEMS focusses on 'safeguard' or the 'do no harm' side to protect vulnerable groups4 (including women in this case) from project impacts, there is a need to systematically include the promotion and mainstreaming of gender aspects into SEMS e.g., women’s economic empowerment, gender equality, integration of gender consideration in project design, etc.

• **Details on PPP structuring and other details are not well captured in the documentation process:** The existing documentation process lacks comprehensive information regarding the structuring of Public-Private Partnership (PPP) projects. Specifically, it fails to capture crucial details related to the institutional framework, allocation of responsibilities, risk distribution, and the value added by the private party in promoting climate and social investments.

• **No standard list of information is required from the proponent during the pre-approval stage:** During the pre-approval stage, an assessment of the capacity of the proponent to properly implement S&E measures in the project construction and O&M phase is crucial. This will help IIF in evaluating the proponent’s awareness of the importance of S&E measures. Based on the proponent’s capacity and associated E&S risks, IIF will be in a better position to make an informed decision on the project. However, at present, there is no standard list of information required from the proponent. The absence of a standard list of information requirements can lead to an inadequate assessment of the proponent’s capacity, which in turn may result in the poor planning, implementation and monitoring of E&S measures in the project by the proponent. Therefore, a specific format seeking the relevant details from the proponents on their capacity to handle projects with E&S aspects (including integration and disclosure of relevant details) should be developed.

• **Guidance on information required for the baseline assessment for indigenous peoples should be strengthened in SEMS:** In the current SEMS framework, there is a standard terms of reference or scope of work for the indigenous people’s plan that needs to be developed for projects if indigenous peoples are being impacted. The standard scope of work includes 1) Baseline Information, 2) Key Findings: Analysis of Impacts, Risks & Opportunities, 3) Result of Consultations, 4) Avoid, Minimize, and Mitigate Negative Impacts and Enhance Positive Impacts, 5) Community-Based Natural Resource Management Component, 6) Measures to Enhance Opportunities, 7) Grievance Mechanism, 8) Costs, budget, timetable, organizational responsibilities and 9) Monitoring, Evaluation & Reporting. However, the baseline information section should also cover a summary of the health, education, and environmental profile of the indigenous community, land tenure, vulnerability, their livelihoods, natural resources (access and the use of), tangible and intangible cultural heritage (including any gaps as mentioned in the ESIA document). While IIF does have an excel based tool which covers qualitative data points in terms of consultations and viewpoints of IP and their community heads to capture baseline information on socio economic aspects to screen IP in any project, assess magnitude of project impact to IP groups, implementing FPIC wherever triggered and developing a plan for IP, it does not have a standard format for capturing qualitative data on indigenous peoples.

• **Components of climate baselines and mitigation/ resilience measures are not discussed in detail:** The current framework lacks detailed information regarding measures for Emergency Preparedness, Response and practices to reduce GHG emissions in the project. Also, the framework does not provide guidelines on utilizing design mechanisms and methodologies during the construction and operation period to minimize climate damage, including air pollution and GHG emissions.

• **A guideline on adopting management techniques for waste based on the quantity and quality of solid waste:** IIF’s SEP 3 makes it mandatory for the proponent to establish adequate systems for solid waste management. However, most of the proponents are currently using third party services for the collection and management of solid

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4 The term "vulnerable groups" refers to specific populations or segments of society that are more susceptible to various forms of harm, discrimination, or disadvantage. Here it includes Ethnic groups, Marginalized people, People with disabilities etc.
waste produced. Therefore, thresholds for the solid waste generation of a project need to be defined based on the service/process used e.g. third party, bio methanation, incineration and waste to energy conversion.

- **No defined local community consultation process in case of relocation or upgradation of cultural heritage:** IIF’s SEP 8 focuses on cultural property and heritage. As per the SEP, in case of relocation of cultural property to another location or upgradation, the client has to follow chance find procedures as agreed during the E&S assessment. However, to ensure the adequate capturing of perceptions, emotions, cultural values and expectations of local communities, a more detailed guideline on the consultation process and monitoring is needed.

- **In case of cultural heritage, tourism enhancement and heritage management plans are not covered:** There is no provision for making a comprehensive heritage management plan from a tourism perspective. This should cover any artefact found during the S&E assessment or could be found during further extension or upgradation of the project.

- **Biodiversity related information requirements and planning as part of the project development process are missing:** Comprehensive biodiversity surveys are needed during the project design phase to identify key flora and fauna species, but the current framework lacks detailed guidance on conducting these surveys and assessing biodiversity value. SEP 6 (Biodiversity Conservation and Natural Resource Management) does not explicitly address the construction and operations phases regarding biodiversity, thereby creating a gap in addressing impacts and mitigation strategies during these phases. While measures to mitigate habitat fragmentation and protect ecologically sensitive areas are adequately discussed, including wildlife-friendly infrastructure and strict environmental guidelines, there is a need to focus on habitat connectivity and restoration to support wildlife movement and preserve critical habitats.

- **No defined format for capturing quantitative data in Project Appraisal Memorandum (PAM) and Social Environmental Due Diligence (SEDD) reports:** Currently the reporting mechanism of IIF captures data mostly in a qualitative form e.g. waste to be managed, trainings to be conducted and monitoring of biodiversity area to be done etc. Unfortunately, such kinds of qualitative baselines tend to create room for ambiguity and misunderstanding of mitigation measures between IIF’s E&S team and the proponent. Therefore, specific data formats should be developed, and/or current formats can be enhanced by adding relevant questions.

### 3.3 Recommendations to Strengthen IIF’s SEMS Framework

Based on the gaps or areas for improvement in IIF’s current E&S system highlighted above, this section provides recommendations on how SEMS can be strengthened to address these gaps. The recommendations are segregated into two categories: 1) Recommendations on the SEP framework and 2) Recommendations on the monitoring and documentation process.

#### 3.3.1 Recommendations on the SEP framework

Highlighted below are the key prioritized recommendations to strengthen the current SEP/SEMS framework:

**Table 3-1: Major recommendations and their prioritization**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Main Recommendation</th>
<th>Prioritisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>A separate SEP/ separate section in IIF’s Principle 5 (land acquisition and involuntary resettlement) on mainstreaming gender in infrastructure projects</td>
<td>High</td>
</tr>
<tr>
<td>2.</td>
<td>• Defining a standard list of information to be collected from the proponent during the pre-approval stage</td>
<td>High</td>
</tr>
</tbody>
</table>
3. Incorporating climate resilience and mitigation measures throughout the project cycle

4. Ensuring community benefits through introducing indicators of monitoring the implementation of RAP

5. Strengthening of information on baseline assessment under indigenous peoples

6. Detailing out biodiversity and natural resources prevention measures

7. Enhancing the application of IIF’s Cultural Heritage SEP principles in infrastructure projects by adding aspects of tourism in comprehensive heritage plan ensuring financial self-sustainability and regular maintenance of the artefact/monument.

<table>
<thead>
<tr>
<th>Source: CRISIL Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>The section below provides more details on each of these recommendations, their priority and actionable steps to be undertaken during different project phases to successfully implement the set of recommendations.</td>
</tr>
</tbody>
</table>

### 3.3.1.1 A separate SEP/section for mainstreaming gender in infrastructure projects

Gender mainstreaming helps to ensure that infrastructure is designed and built to maximize positive and equitable benefits—such as income generating opportunities and access—while mitigating risks and threats. Each stage of the infrastructure project must address the safety and accessibility needs of all users, including women, elderly, children, lesbian, gay, transgender, queer, and intersex (LGBTQI), people living with disabilities (PLWD), and other socially excluded groups. Gender mainstreaming considers the diverse needs of women and other populations in various roles including as active stakeholders, employees, entrepreneurs, contractors, decisionmakers as well as the end users of infrastructure. The design of infrastructure must take into consideration how women, men, girls, and boys access and use it, as well as identify opportunities to empower and transform individual lives and communities.

In addition, adopted in 2015, the SDGs are 17 international development goals that all UN agencies have agreed to achieve by 2030. While SDG 5 is focused on promoting gender equality and empowering women, achieving the other sixteen goals is also heavily dependent on removing gender inequality and empowering women. All SDGs are relevant to the work that United Nations Office for Project Services (UNOPS) and United Nations (UN)Women carry out, with some specifically focused on infrastructure, which include explicit social/gender mainstreaming within the targets.

As mentioned earlier, since there is no specific SEP on gender inclusivity in the current framework, this aspect has been often less attended or neglected in the project cycle. Therefore, a separate SEP or separate section in IIF’s principle 5 (land acquisition and involuntary resettlement) on mainstreaming gender in infrastructure projects is recommended to be added. The following section explains some of the requirements that should be included in the current framework.

**Key gender mainstreaming activities throughout the project phases:**

Infrastructure is a key driver to economic and social development that helps to positively change the lives of individuals. People use infrastructure in daily-life and it is essential for the functioning of society. Infrastructure is meant to address people’s needs and improve living conditions. Therefore, the roles and needs of different groups of people—women and men, girls and boys, youth and elderly, people living with disabilities, and other socially-excluded groups who use public infrastructure—have to be considered. All affected persons must be empowered as decision makers and owners in the planning, design, construction, and operations and maintenance (O&M) of infrastructure investments.
1. **Project design and preparation:**

Once the idea for a new infrastructure project is conceived, this first stage of the project life cycle refers to transforming that idea into a series of practical steps to design and prepare for a project. At this stage, the client should identify outcomes and impacts, conduct a gender analysis, draft a gender action plan (GAP), carry out stakeholder and community engagement to ensure the participation of marginalized groups, engage gender equality and social inclusion specialists, train project staff, develop an ESIA, and design a resettlement action plan (RAP), if necessary. The project’s long-term viability must also be assessed.

- **Gender analysis:** Gender analysis provides evidence-based project design considerations to ensure activities are designed appropriately to successfully mainstream gender within infrastructure projects. Gender analysis is a way to examine the roles and activities, resources and constraints, and benefits and incentives of women and men affected directly or indirectly by a project. This will also help to map women and men at the community level to assist planners in designing efficient projects. The client should carry out gender analysis considering the following steps:
  - Engage support of a qualified social inclusion and gender equality specialist.
  - Identify existing quantitative and qualitative data (e.g., literature, country assessments and action plans, and relevant project evaluations).
  - Identify community, organizational, and government stakeholders who may influence how certain groups are involved in and/or benefit from the project. Each stakeholder should be analysed with a gender lens:
    - Potential risks of the project on each stakeholder
    - Potential benefits the project may provide to each stakeholder
    - Risks to achieving project goals if certain people/groups are not engaged, or if gender norms are not changed
  - Engage a qualified expert to conduct community engagement with key stakeholders and community members identified who may influence how the project interacts with and/or benefits subsets of the community.
  - Utilizing a gender analysis framework, analyse gender-based constraints and opportunities specific to the project and formulate a gender action plan with recommended activities that address the constraints and opportunities.

- **Engagement of gender equality and social inclusion specialists:** The involvement of expert judgement is vital to the successful definition of the project scope, time, cost, and quality requirements. Expert judgement involves the inclusion of individuals with specific technical experience in these areas: legal, finance, procurement, infrastructure (for complex infrastructure projects), project management, the environment and gender, along with any other individuals at the country or regional level with relevant expertise.

  The client may engage short-term technical experts to support planning and review of gender analyses and gender action plan development during pre-engagement. Additionally, it is advised to budget for a gender equality and social inclusion specialist to be part of a project team, on a part-time or full-time basis depending on the project scope.

- **Stakeholder analysis and community engagement:** This will ensure that throughout the project, those implementing the project identify and engage with a broad range of stakeholders from impacted communities; understand and mitigate project risks to individual subsets of community members, including women, men,
boys, and girls; and leverage opportunities to contribute to gender equality. The proponent should carry out this community engagement process through facilitated workshops.

- **Project-specific gender action plans:** A project-specific gender action plan (GAP) is the output of a gender analysis for a specific project. The client should prepare a project specific GAP. The GAP should have detailed recommended activities that specifically address the gender-based constraints and opportunities that were identified during the gender analysis. The GAP should include specific activities, targets, responsible actors, and indicators to measure progress and outcomes. The GAP should not be a stand-alone document; rather it should inform and be integrated into overarching project work plans, M&E plans, and project budgets for effective gender mainstreaming throughout the project.

- **Environmental and Social Impact Assessments (ESIAs) with focus on gender:** While in the Indonesian E&S framework, a detailed assessment of E&S aspects is required, gender inclusivity is not discussed in detail. Therefore, it is advised that the client undertakes additional assessments on gender. This assessment should aim to answer questions such as:
  
  o What are the current or predicted positive/negative impacts (economic, social, and environmental) of the different project stages on men and women, including on their activities, and access to and control of resources?
  o Does the project provide opportunities to promote gender equality through specific institutions in the area? Which institutions?
  o Will social cohesion be diminished or damaged, such as women’s time conversing while collecting water?

- **Resettlement Action Plans with gender responsiveness (RAPs):** At present, as per SEP 5 (Land acquisition and involuntary resettlement) of the SEMS framework, land acquisition or involuntary resettlement should be avoided where possible. In cases where avoidance is not possible, adverse social and economic impacts from land acquisition or restrictions on land use should be minimized by 1) providing compensation for loss of assets at replacement cost and 2) ensuring that resettlement action plans are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected. Additionally, the resettlement plan should be gender responsive. The ultimate goal of gender-responsive and socially inclusive resettlement should be to minimize impacts, carry out resettlement processes in a culturally appropriate manner, ensure that women have access to equal financial compensation and property rights, provide special assistance for particularly vulnerable people and social groups, and lend extra support in the case of loss of economic activities.

2. **Project implementation:**

This stage of the project involves the day-to-day implementation activities for the infrastructure project, including construction and supervision and delivering project outputs to the agreed scope, schedule, budget, and quality requirements. It should involve ongoing consultation with a gender equality and social inclusion specialist and implementation of activities outlined in the GAP, ESIA, and RAP. At this stage, the proponent should focus on the following aspects to ensure gender inclusivity in the program.

- **GAP Implementation:** To ensure project success from a GAP perspective, it is crucial that planned GAP activities are embedded into day-to-day operations and implementation, including design specifications, community consultations, or quotas to ensure that minimum requirements are met. Therefore, the proponent is advised to continually ensure that the project is on track in implementing the GAP. Illustrative questions the proponent should ask include:
  
  o Does the intended project solution address the needs of women, men, boys and girls?
  o Are both women’s and men’s opinions and input taken into consideration while designing the solution?
Will the completed project solution be easy to operate and maintain by both women and men?
Is there a need to promote gender awareness among colleagues, partners and suppliers to implement the project work in a gender sensitive manner?
Does the GAP address water, health, hygiene, security, and sanitation aspects, especially for women?
Are women and men trained and involved in the long-term running and maintenance of the project asset after the project closes?
Are there any complementary women’s empowerment and men partner-for-change activities that can be undertaken as part of the project?

- **Construction Supervision:** Construction supervision is not just about building infrastructure – it is a highly skilled operation that, if done effectively, may result in promoting local capacity, entrepreneurship, and livelihood opportunities for local women and men. If done poorly, construction supervision may have negative unintended consequences, ranging from reinforcing or worsening existing gender equalities or increasing risks in affected communities – such as gender-based violence (GBV), HIV and STIs, human trafficking, and poverty. Therefore, the proponent should include the following items in the Gender-responsive construction management and supervision framework:
  - The existence of a sexual harassment policy covering both contractors and subcontractors
  - Skills building and training that target both women and men equally and facilitates upward job mobility
  - Labour force integrated by different ethnic groups or nationalities
  - Women-friendly construction site practices, flexible working hours, and sanitary accommodation
  - Safe work practices
  - Family-friendly work practices that provide, for example, safe and nearby childcare solutions that are easily accessible to breastfeeding mothers and parents

3. **Project operations and maintenance:**
   This stage of the project cycle complements implementation through the ongoing GAP, ESIA, and RAP activities. This phase also specifically considers managing the project’s workforce, i.e., creating human resource policies and practices that foster commitments to gender equality and social inclusion. There are various mechanisms to facilitate women’s involvement in – and benefits from – infrastructure O&M such as:
   - Quotas for employment of women and minorities in infrastructure maintenance
   - Formation of, or engagement and contracting with, community-run women’s groups, cooperatives or local micro-enterprises
   - Provisions for equal pay and safe working conditions
   - Basic skills training in operations and maintenance (technical and on-the-job)
   - Targets for women’s participation in the governance structure
   The proponent should incorporate the above-mentioned actions during the O&M process.

4. **Project monitoring**
   The last stage of the project cycle contemplates the project’s operational and financial closure. Gender-mainstreamed monitoring and evaluation (M&E) is a key aspect, in addition to ensuring local capacity for maintaining the final infrastructure. Lessons learned and best practices are documented in reports that monitor contributions to gender equality and social inclusion.
   - **Gender-mainstreamed monitoring and evaluation plan:** Gender mainstreaming in the design and implementation of a project’s monitoring, evaluation, and learning (MEL) plan is a key success factor to the
 realization of the project’s GAP. In the GAP, the proponent should include indicators to measure performance and outcomes related to gender equality, feed these indicators into regular monitoring and reporting, and incorporate gender equality learning into evaluations as mentioned below:

- **Indicators and evaluation questions:** The proponent is recommended to disaggregate indicators by sex and age, include indicators that measure outcome-level results related to gender, and include evaluation questions regarding gender equality for planning of mid-term and final evaluations. Disaggregating data by sex is key to critical thinking, learning, and making evidence-based decisions to improve projects and achieve intended results. By doing so, project managers and decision makers will be provided with an analytical lens through which questions about project performance may be asked. Further, collection and analysis of qualitative data is critical to shed light on, and contextualize, this type of quantitative data.

- **Data collection plans, processes, and logistics:** The proponent should ensure that women, men, and representative segments of the population are included in the survey sampling and include remote areas to avoid gender or social bias. Further, the proponent should employ both men and women data collectors on the evaluation/assessment team to ensure gender balance and train them to be gender sensitive.

- **Reporting:** Data related to gender should be included in meeting minutes, workshop reports, training reports, regular checkpoints, Semi Annual Review reports and Annual Social Safeguard and Environment Monitoring reports (ASESMRs).

### 3.3.1.2 Incorporating climate resilience and mitigation measures throughout the project cycle

Climate change is a major threat to the environment and to human development. It is important that infrastructure projects in Indonesia are designed and implemented in a way that is resilient to the impacts of climate change and that minimizes greenhouse gas emissions. To reflect the importance of climate change, SEP 3 could be improved, particularly in relation to climate change.

1. **Project design and planning**

   The design phase is the most important phase for assessing the potential climate change impacts of an infrastructure project. During this phase, the potential impacts of climate change on the project can be identified and mitigated.

   SEP 3 requires projects to conduct a climate risk assessment during the design phase. However, the principle does not specify the level of detail that should be included in this assessment. Therefore, SEP 3 should be expanded to require projects to conduct a comprehensive climate risk assessment that identifies all potential climate change impacts on the project, and to develop adaptation plans to mitigate the potential climate change impacts. These plans should set out the measures that will be taken to adapt to the impacts of climate change, such as the following:

   - **Strengthening Environmental Impact Assessments (EIAs):** IIF can enhance the rigor of its EIAs by incorporating a more comprehensive evaluation of potential environmental risks and impacts. This can include a thorough analysis of air quality, noise pollution, and GHG emissions. By conducting advanced modeling and monitoring techniques, IIF can better assess the project's potential impacts on air and sound quality, while also considering the climate change implications of GHG emissions.

   - **Integration of circular economy principles:** IIF should explore incorporating circular economy principles into the project design phase. This involves prioritizing resource efficiency, waste reduction, and recycling throughout the project’s lifecycle. By adopting sustainable design strategies and promoting the use of recycled or renewable materials.
materials, IIF can contribute to waste management goals and reduce the environmental footprint of infrastructure projects.

- **Evaluate the cost-effectiveness of various climate mitigation strategies as per other climate models of MFIs.** This can assist in prioritizing sustainable energy projects based on their potential for emission reductions and their economic viability.

- **Undertake scenario analysis:** IIF should incorporate scenario analysis techniques to explore different future trajectories and outcomes for sustainable energy development. This can provide insights into the potential impacts of different policy decisions and investment pathways.

- **Detailing climate change reduction/mitigation measures:** While IIF’s SEP 3 covers pollution prevention and abatement and climate change, it focuses more on environmental and pollution abatement rather than climate change. It explains compliance in terms of ensuring water supply and wastewater management, solid waste management and ambient air. However, in terms of climate change, it only broadly explains Emergency Preparedness and Response and reduction of greenhouse gases (GHG) emission in the project. It lacks details on measures that can be incorporated for Emergency Preparedness and Response and practices/ways through which GHG emissions can be reduced in the project. Therefore, it is recommended that an annexure is developed that explains the importance of GHG emission reduction and practices through which it can be reduced during the construction and operation phase of the project. This can then be used as a ready reference for proponents and helps in enhancing their knowledge on GHG emission reduction practices.

- **The current framework lacks a guideline on how to use design mechanisms and methodologies during construction for ensuring reduced damage to the climate in terms of air pollution (including GHG emissions).** Further, a separate guideline on climate such as environment can be developed to standardize the baselines (highest possible allowance) for the different types of projects financed by IIF for solid waste (hazardous and non-hazardous) and wastewater treatment plants and processes for mitigating the potential risks.

- **A guideline on adopting management techniques for waste to energy based on quantity and quality of solid waste:** IIF’s SEP 3 makes it mandatory for a proponent to establish adequate systems for solid waste management. It should also include a guideline on waste to energy measures to be adopted such as incineration, bio methanation and RDF production etc., based on waste produced and composition mix of waste.

## 2. Project implementation

The construction phase is also an important phase for mitigating the potential climate change impacts of an infrastructure project. During this phase, the construction methods and materials used can be chosen to minimize greenhouse gas emissions and to increase the resilience of the project to the impacts of climate change.

SEP 3 does not specifically address the construction phase in relation to climate change. However, the principle does require projects to implement the adaptation plans that were developed during the design phase. Following are the recommendations to be included in the current methodology:
• **Implementation of Low-Carbon Construction Practices**: IIF can encourage the adoption of low-carbon construction practices, such as using energy-efficient machinery and equipment, promoting sustainable transportation options for construction materials, and minimizing the use of high-emission construction techniques. By setting stringent emission standards and incentivizing low-carbon practices, IIF can effectively reduce construction-related GHG emissions.

• **Noise and Air Pollution Mitigation**: IIF may encourage measures to mitigate noise and air pollution during the construction phase. This can involve the use of noise barriers, equipment insulation, and effective dust suppression measures. By incorporating advanced construction methods and technologies, such as electric or hybrid machinery, IIF can significantly reduce both air and sound pollution impacts.

3. **Project operations and maintenance**

The operations and maintenance phase is the final phase for mitigating the potential climate change impacts of an infrastructure project. During this phase, the operational practices and maintenance procedures can be chosen to minimize greenhouse gas emissions and to increase the resilience of the project to the impacts of climate change.

SEP 3 does not specifically address the operations and maintenance phase in relation to climate change. However, the principle does require projects to monitor the climate change impacts of the project and to take corrective action as necessary. Additional measures that IIF can apply include:

• **Energy Efficiency Optimization**: IIF can focus on optimizing energy efficiency during the operations and maintenance phase of infrastructure projects. This can involve the installation of energy management systems, utilization of energy-saving technologies, and regular energy audits to identify areas for improvement. By reducing energy consumption, IIF can contribute to GHG emissions reduction and climate change mitigation.

• **Enhanced Waste Management and Wastewater Treatment**: IIF should prioritize improved waste management and wastewater treatment in infrastructure projects. This can include the implementation of recycling and waste reduction programs, as well as the utilization of advanced wastewater treatment technologies. By ensuring proper waste disposal and wastewater management, IIF can minimize environmental pollution and promote sustainable practices.

3.3.1.3 **Ensuring community benefits through the introduction of indicators to monitor the implementation of the RAP**

As mentioned earlier, under SEP 5 (land acquisition and involuntary resettlement), IIF has stringent compliance requirements for land acquisition and the resettlement action plan (RAP) compared to AMDAL. For monitoring purposes, IIF or an independent consultant (appointed by IIF) visits sites, validates information and interacts with the community, project affected people and other relevant stakeholders. However, these visits are sometimes not carried out on a regular basis. In addition, details of the RAP are not discussed in detail in reports such as PAM, SEDD andASESMR. In addition, there is scope for improvements when it comes to monitoring and documenting the implementation progress of the RAP. Therefore, it is recommended that IIF defines indicators to monitor those issues associated with the RAP. This will help in assessing whether the RAP has been implemented as planned or not. This will also help in assessing the responsiveness of the project, which will be useful for the Stage 1 tool.

Set out below are some potential indicators which can be added in the system to assess or monitor implementation of the RAP.
### Table 3-1 Potential indicators for monitoring the implementation of the RAP

<table>
<thead>
<tr>
<th>Monitoring issues</th>
<th>Monitoring indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Budget and Timeframe</strong></td>
<td>- Have all land acquisition and resettlement staff been appointed and mobilized for field and office work on schedule?</td>
</tr>
<tr>
<td></td>
<td>- Have capacity building and training activities been completed on schedule?</td>
</tr>
<tr>
<td></td>
<td>- Are resettlement implementation activities being achieved against the agreed implementation plan?</td>
</tr>
<tr>
<td></td>
<td>- Are funds for resettlement being allocated to resettlement agencies on time?</td>
</tr>
<tr>
<td></td>
<td>- Have resettlement offices received the scheduled funds?</td>
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<tr>
<td></td>
<td>- Have funds been disbursed according to the RAP?</td>
</tr>
<tr>
<td></td>
<td>- Has all land been acquired and occupied in time for project implementation?</td>
</tr>
<tr>
<td><strong>Delivery of Entitlements</strong></td>
<td>- Have all PAPs received entitlements according to numbers and categories of loss set out in the Entitlement Matrix?</td>
</tr>
<tr>
<td></td>
<td>- How many displaced households have received land titles?</td>
</tr>
<tr>
<td></td>
<td>- How many affected households have relocated and built their new structures at the new location?</td>
</tr>
<tr>
<td></td>
<td>- Are income and livelihood restoration activities being implemented as planned?</td>
</tr>
<tr>
<td></td>
<td>- Have affected businesses received entitlements?</td>
</tr>
<tr>
<td></td>
<td>- Have those PAPs losing their eroded land received proper compensation?</td>
</tr>
<tr>
<td></td>
<td>- Have the community structures been compensated and rebuilt at the new site?</td>
</tr>
<tr>
<td><strong>Consultation, Grievance Redress and Special Issues</strong></td>
<td>- Have resettlement information brochures/leaflets been prepared and distributed?</td>
</tr>
<tr>
<td></td>
<td>- Have consultations taken place as scheduled including meetings, groups, community activities?</td>
</tr>
<tr>
<td></td>
<td>- Have any PAPs used the grievance redress procedures? What were the outcomes?</td>
</tr>
<tr>
<td></td>
<td>- Have conflicts been resolved?</td>
</tr>
<tr>
<td><strong>Benefit Monitoring</strong></td>
<td>- What changes have occurred in patterns of occupation compared to the pre-project situation?</td>
</tr>
<tr>
<td></td>
<td>- What changes have occurred in income and expenditure patterns compared to pre-project situation?</td>
</tr>
<tr>
<td></td>
<td>- Have PAPs income kept pace with these changes?</td>
</tr>
<tr>
<td></td>
<td>- What changes have occurred for vulnerable groups?</td>
</tr>
</tbody>
</table>

IIF should ask the proponent to add the status of the above-mentioned indicators in the ASESMR which will ensure proper monitoring and implementation of the RAP.

### 3.3.1.4 Detailing biodiversity and natural resources prevention measures

Indonesia is renowned for its rich biodiversity, with diverse flora and fauna species that are of global importance. As Indonesia Infrastructure Finance (IIF) strives to develop infrastructure projects, it is essential to prioritize the protection and conservation of biodiversity. This section explores possible interventions to enhance the application of IIF’s Biodiversity SEP principles in infrastructure projects, focusing on the project design phase, construction phase, and operations and maintenance phase. These interventions are compared to global standards set by institutions such as the World Bank Group, International Monetary Fund (IMF), United Nations (UN), and other Multilateral Funding Institutions (MFIs).
1. **Project design and planning**

SEP 6 requires projects to conduct a biodiversity impact assessment during the design phase. However, the principle does not specify the level of detail that should be included in this assessment. SEP 6 should require projects to conduct a comprehensive biodiversity impact assessment that identifies all potential impacts of the project on flora and fauna, including the following:

- The impact on the habitat, migration, breeding and food chain of flora and fauna

SEP 6 may also suggest the development of project specific mitigation plans to minimize the potential biodiversity impacts. These plans may set out the measures that will be taken to protect flora and fauna from the impacts of the project, for example:

- Relocating flora and fauna to a safe location
- Creating wildlife corridors to allow flora and fauna to migrate

Set out below are some of the major actions that can be incorporated into current practices to enhance S&E compliance and provide further information for tools 1 and 2:

- **Comprehensive Biodiversity Surveys:** IIF can conduct thorough biodiversity surveys during the project design phase to identify the presence of key flora and fauna species in the project area. These surveys should encompass both terrestrial and aquatic ecosystems. By involving ecologists and biodiversity experts, IIF can gain a deeper understanding of the biodiversity value in the project area and make informed decisions to minimize negative impacts.

- **Habitat Connectivity and Restoration:** IIF should prioritize the maintenance and restoration of habitat connectivity within and around infrastructure projects. This can involve the creation of wildlife corridors, reforestation initiatives, and the establishment of protected areas or buffer zones to preserve critical habitats. By enhancing habitat connectivity, IIF can support the movement of wildlife populations, promoting species resilience and overall biodiversity conservation.

2. **Project implementation**

SEP 6 does not specifically address the construction phase in relation to biodiversity. However, the principle does require projects to implement the mitigation plans that were developed during the design phase.

- **Mitigation of Habitat Fragmentation:** IIF should implement measures to mitigate habitat fragmentation caused by construction activities. This can include the installation of wildlife-friendly fencing, wildlife crossings, and eco-bridges to enable the safe movement of fauna across infrastructure corridors. Additionally, IIF can adopt construction practices that minimize land disturbance and avoid sensitive habitats.

- **Conservation of Ecologically Sensitive Areas:** IIF should take proactive measures to protect ecologically sensitive areas during the construction phase. This involves delineating and securing the boundaries of such areas to prevent encroachment and degradation. By implementing strict environmental guidelines and monitoring mechanisms, IIF can ensure that construction activities do not harm critical habitats or species.

3. **Project operations and maintenance**
SEP 6 does not specifically address the operations and maintenance phase in relation to biodiversity. However, the principle does require projects to monitor the biodiversity impacts of the project and to take corrective action as necessary.

- **Biodiversity monitoring and management plans:** IIF should develop and implement comprehensive biodiversity monitoring and management plans for infrastructure projects. These plans should include regular assessments of the project’s impact on biodiversity, identification of potential risks, and the implementation of appropriate mitigation measures. Monitoring can involve camera traps, acoustic monitoring, and engagement with local communities and scientific institutions to track changes in flora and fauna populations.

- **Stakeholder engagement and conservation partnerships:** IIF should actively engage with local communities, conservation organizations, and relevant government agencies to foster conservation partnerships and promote community involvement in biodiversity conservation efforts. By integrating traditional knowledge and involving local stakeholders, IIF can develop effective conservation strategies that align with both global standards and local priorities.

- **Comparison with global standards:** The proposed interventions align with the global standards set by institutions such as the World Bank Group, IMF, UN, and other Multilateral Funding Institutions. Comprehensive biodiversity surveys, habitat connectivity and restoration initiatives, mitigation of habitat fragmentation, conservation of ecologically sensitive areas, biodiversity monitoring and management plans, and stakeholder engagement are all recognized as essential components of biodiversity conservation by these global institutions. Implementing these interventions would ensure that IIF’s approach to biodiversity preservation in infrastructure projects meets international best practices.

### 3.3.1.5 Details of cultural heritage aspects

Preserving and protecting cultural heritage is of paramount importance in infrastructure development. Indonesia Infrastructure Finance (IIF) plays a significant role in ensuring the safeguarding of cultural heritage throughout the lifecycle of infrastructure projects. This section explores possible interventions to enhance the application of IIF’s Cultural Heritage SEP 8 in infrastructure projects, with a focus on the project design phase, construction phase, and operations and maintenance phase. These interventions are compared to global standards set by institutions such as the World Bank, International Monetary Fund (IMF), United Nations (UN), and other Multilateral Funding Institutions.

1. **Project design and planning:**

   SEP 8 should require projects to conduct a comprehensive cultural heritage impact assessment that identifies all potential impacts of the project on cultural heritage, including the following:

   - **Comprehensive Cultural Heritage Assessments:** IIF can conduct thorough cultural heritage assessments during the project design phase to identify and assess the significance of cultural heritage sites, artifacts, and intangible heritage present in the project area. This can include archaeological surveys, ethnographic studies, and consultations with local communities and cultural heritage experts. By ensuring a comprehensive understanding of the cultural heritage context, IIF can integrate appropriate measures for preservation and protection into project design plans.

   - **Integration of Cultural Heritage Conservation Plans:** IIF should prioritize the integration of cultural heritage conservation plans into project designs. These plans should outline strategies for preserving and managing cultural heritage sites, artifacts, and intangible heritage affected by the project. Integration can involve measures such as site preservation, documentation, and the implementation of appropriate conservation techniques.
incorporating these plans from the outset, IIF can proactively mitigate potential adverse impacts on cultural heritage.

2. **Project implementation**

SEP 8 does not specifically address the construction phase in relation to cultural heritage. However, the principle does require projects to implement the mitigation plans that were developed during the design phase.

- **Heritage-sensitive construction practices:** IIF should adopt heritage-sensitive construction practices that minimize the impact on cultural heritage during the construction phase. This can include employing skilled conservation specialists, implementing measures to protect archaeological sites or historic structures, and utilizing construction techniques that minimize vibrations and damage to sensitive heritage assets. By prioritizing the protection of cultural heritage during construction, IIF can ensure its preservation for future generations.

- **Capacity Building and Stakeholder Engagement:** IIF should facilitate capacity-building initiatives for construction workers, contractors, and relevant project stakeholders to raise awareness and understanding of the importance of cultural heritage conservation. Training programs can include heritage sensitization workshops, skills development for heritage-friendly construction techniques, and collaboration with local communities and cultural heritage organizations. By promoting stakeholder engagement and knowledge sharing, IIF can foster a culture of respect and care for cultural heritage.

- **A defined local community consultation process in case of relocation or upgradation of cultural heritage:** In cases where this is a relocation of cultural property to another location or upgradation if cultural property is found in the project area or in near proximity through chance find procedure, then, perceptions, emotional and cultural value and expectations of local communities should be captured through a thorough consultation process and considered when making any changes to the cultural heritage. To ensure this, a detail guideline on consultation processes and monitoring should be included in this SEP.

3. **Project operation and maintenance**

SEP 8 does not specifically address the operations and maintenance phase in relation to cultural heritage. However, the principle does require projects to monitor the cultural heritage impacts of the project and to take corrective action as necessary.

- **Cultural Heritage Monitoring and Maintenance:** IIF should establish protocols for monitoring and maintaining cultural heritage assets during the operations and maintenance phase of infrastructure projects. This can involve regular inspections, documentation of any changes or deterioration, and implementing appropriate maintenance and conservation practices. By establishing clear responsibilities and guidelines, IIF can ensure the ongoing preservation of cultural heritage assets.

- **Cultural Heritage Tourism and Community Empowerment:** IIF can explore opportunities to leverage cultural heritage assets for sustainable tourism development and community empowerment. This can involve partnering with local communities to develop tourism initiatives that promote cultural heritage, generate economic benefits, and enhance community participation. By integrating cultural heritage into tourism planning, IIF can contribute to the sustainable development of both infrastructure and local communities.

- **Comparison with Global Standards:** The proposed interventions align with the global standards set by institutions such as the World Bank Group, IMF, UN, and other Multilateral Funding Institutions. Conducting comprehensive cultural heritage assessments, integrating conservation plans into project designs, adopting
heritage-sensitive construction practices, promoting stakeholder engagement, establishing monitoring and maintenance protocols, and leveraging cultural heritage for sustainable tourism are recognized as crucial elements of cultural heritage preservation by these global institutions. Implementing these interventions would ensure that IIF’s approach to cultural heritage conservation in infrastructure projects meets international best practices.

3.3.1.6 Detailing of information on the baseline assessment for indigenous people

At present, there is no standard format for capturing qualitative data on indigenous people. The lack of standardization for capturing qualitative and quantitative data could lead to a poor baseline assessment. In case the project is located on land or territory of indigenous people, tribal people, or other traditional peoples or in an area to which these groups have a collective attachment, then standard provisions need to be followed in order to ensure meaningful consultations and free, prior and informed consent (FPIC) as mentioned in the SEMS framework. The baseline assessment should capture the following aspects:

- Explain the key characteristics that qualify the identified groups as indigenous groups, including whether they self-identify as such and whether they are recognized by others or by national legislation
- Describe and map the location of their settlements; specify whether some of the indigenous groups are living in voluntary isolation
- Describe their systems of livelihood (food, medicine, artefacts) and customary land and resource management regimes
- Describe their customary cultural, economic, social, or political institutions social organization and institutions including identification of rules and channels of communication that should be used for project consultation processes
- Identify sites and resources of cultural and spiritual significance for these groups (in relation to the project area)
- Specific social issues, vulnerabilities and risks - particularly those faced by women and children

To capture the above-mentioned aspects, IIF is advised to ask the proponent to provide the following data in the baseline assessment or during the Social Safeguard Due Diligence (SEDD). IIF is also advised to include this information in the Project Appraisal Memorandum (PAM) and Corrective Action Plan (CAPs). This will not only ensure a comprehensive assessment, but also help to make the process of testing the S&E responsiveness of projects through the Stage 1 Tool easier.

<table>
<thead>
<tr>
<th>Total no. of indigenous people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of total, no. of indigenous men impacted</td>
</tr>
<tr>
<td>Of total, no. of indigenous women impacted</td>
</tr>
<tr>
<td>Of total, no. of children</td>
</tr>
</tbody>
</table>

Source of livelihood and no. of people (men and women) involved under each category:

- Farming
- Rearing of livestock
- Artefacts related activities
- Traditional medicine making
- Any other activities

Their source of water
<table>
<thead>
<tr>
<th>Their source of food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do they avail formal medical facilities. If yes, please mention the name?</td>
</tr>
<tr>
<td>Are their kids enrolled in formal education institutes? If yes, please mention the name?</td>
</tr>
<tr>
<td>Do they use any facilities outside their community/modern facilities? If yes, please name the facilities and for what?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How are indigenous people impacted from the following options?</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Individuals’ land is getting acquired and people are to be displaced. If yes, then how many HHs are getting impacted?</td>
</tr>
<tr>
<td>• Is their source of livelihood getting impacted. How? In case of land acquisition, how many plots are to be acquired and of how many people?</td>
</tr>
<tr>
<td>• Common area/ground/gathering area etc. is getting acquired. If yes, how is the area currently being utilized by the community? Is there an alternative available?</td>
</tr>
<tr>
<td>• Common physical structures i.e., deity or any physical thing with cultural and spiritual significance getting removed/displaced?</td>
</tr>
<tr>
<td>• Their privacy or social values getting impacted?</td>
</tr>
<tr>
<td>• Their source of water/food/natural resources getting impacted?</td>
</tr>
<tr>
<td>• Are there any women specific impacts? If yes, what are the impacts?</td>
</tr>
</tbody>
</table>

### 3.3.2 Recommendations on the monitoring and documentation process

#### 3.3.2.1 Define a standard list of information to be collected from the proponent during the pre-approval stage

During the pre-approval stage, an assessment of the capacity of the proponent to implement S&E measures during the project construction and O&M phase is crucial. This will help IIF in evaluating to what extent S&E measures will be included in the project and based on the proponent’s capacity and associated S&E risks, IIF will be in a better position to make an informed decision on approval of the project.

Set out below is the minimum information that IIF should ask from the proponent during the pre-approval stage as part of the project information document:

- Has the project proponent in the past developed any project with climate adaptation and social inclusivity?
- Does the project proponent disclose emergency management plans (e.g., evacuations, fire drills, flood preparedness etc.)?
- Does the project proponent disclose ESG parameters under their operations in annual reports or other documents?
- Does the project proponent have a policy for providing equal employment opportunity?
- Has the project proponent achieved any green building certification/undertaken any training or certification on climate change adaptation and/ or Disaster Risk Management?
- Does the project lead or someone in the project/component have capacity (experience or certification) to implement any climate related activities? (e.g. ISO14000 on quantifying, validating, and verifying organization’s carbon footprint for implementer and auditor, or any ISO14000 family Environmental Management System)
- In the case of a PPP, does the government and proponent have equitably apportioned risk responsibilities, balancing Force Majeure clauses and with responsibilities for likely impacts of climate change?
• Has the proponent availed any green financing, climate financing, carbon credits?

3.3.2.2 Information to be included in the Project Appraisal Memorandum / Social and environmental due diligence reports

Currently, details on S&E measures undertaken in the project are explained more in descriptive measures which does not give a full picture of the implementation of measures and their impacts. Therefore, it is recommended to include the following minimum level of information in these reports to enable IIF to carry out a comprehensive assessment of the S&E risks and responsiveness of the project.

Table 3-2 Information checklist to be included in the PAM / SEDD reports

<table>
<thead>
<tr>
<th>1 Project status &amp; SEMS implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Project Name</td>
</tr>
<tr>
<td>• Project Proponent Name</td>
</tr>
<tr>
<td>• Project Category (Pipeline/ Portfolio)</td>
</tr>
<tr>
<td>• Current Status</td>
</tr>
<tr>
<td>• Sector</td>
</tr>
<tr>
<td>• Project Cost</td>
</tr>
<tr>
<td>• Location based Risk</td>
</tr>
<tr>
<td>• Environmental Risk</td>
</tr>
<tr>
<td>• Project Specific Risk</td>
</tr>
<tr>
<td>• Is it a PPP project</td>
</tr>
<tr>
<td>• Is this a priority sector under Nationally Determined Contributions (NDC)/ National Adaptation Plans (NAPs)/ Aspects of Paris Agreement?</td>
</tr>
<tr>
<td>• Does project's scope align with the framework of Sustainable Development Goals (SDG)?</td>
</tr>
<tr>
<td>• Is the project identified under a province level Climate Action Plan?</td>
</tr>
<tr>
<td>• Is it a strategic project under the RPJMN?</td>
</tr>
<tr>
<td>• Is this a priority sector under the national climate mitigation plan/ Disaster Risk Management international policies like the Sendai Framework and local/provincial DRM policies</td>
</tr>
<tr>
<td>• Has the project proponent in the past developed any project with climate adaptation and social inclusivity?</td>
</tr>
<tr>
<td>• Does the project proponent disclose its emergency management plans (e.g., evacuations, fire drills, flood preparedness etc.) to employees and general public?</td>
</tr>
<tr>
<td>• Does the project proponent disclose ESG parameters under their operations in annual reports or other documents?</td>
</tr>
<tr>
<td>• Does the project proponent have a policy for providing equal employment opportunity?</td>
</tr>
<tr>
<td>• Has the project proponent achieved any green building certification/undertaken any training or certification on climate change adaptation and/or Disaster Risk Management?</td>
</tr>
<tr>
<td>• Does the project allocate resources (team and other material resources) to manage / implement any E&amp;S or climate-related risks and activities. (e.g. ISO14064 on quantifying, validating, and verifying organization's carbon footprint for implementer and auditor, or any ISO14000 family Environmental Management System, OHS of employees)</td>
</tr>
<tr>
<td>• In case this is a PPP, does the government and proponent have shared risk responsibilities including Force Majeure and likely impacts of the project on climate change?</td>
</tr>
<tr>
<td>• Has the project proponent availed any green financing, climate financing, carbon credits?</td>
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<table>
<thead>
<tr>
<th>2 Labor and working conditions</th>
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</tbody>
</table>
• Is there any plan in place to consult with stakeholders?
• Will PAPs be employed in the implementation of the project?
• Are there any additional activities planned by the project proponent under corporate CSR for the PAPs, such as social and economic resilience, projects to tackle local climate risk etc?
• Has the project proponent undertaken an assessment to evaluate the impact of the project on women?
• Does the project expose women to gender-based risks?
• Is there any plan to address identified gender risks/any potential Gender based violence during the project life cycle (by gender - we mean men, women and others)?
• Have women provided inputs during the consultation process conducted during project design?
• Is there any mechanism or framework adopted for women endowments (health, education and social protection) and women’s ownership and asset control?
• Does the project proponent/project provide trainings to women for acquiring skills that may help improve their economic condition?
• Is there a plan for women to benefit from all the positive outcomes that the project may generate?
• Is there a separate grievance mechanism for women?
• Has the project created facilities/infrastructure keeping women requirements/needs in mind?

3 Pollution prevention and reduction, and climate change

• Does the project design include measures to reduce the negative effects of climate risks and vulnerabilities identified as part of the assessment?
• Is infrastructure designed to be climate smart?
• Does the project cause or exacerbate climate hazards, risks and/or vulnerability?
• Does the project involve usage of nature-based solutions to reduce the climate risks?
• Has the project identified Key Performance Indicators to track resilience building measures?
• Does the project's O&M phase include the measures identified in the climatic risk assessment?
• Does the project have disaster policy, evacuation plans, management plans in case of any natural hazard over the project lifecycle?
• Does the project have access to an early warning system and emergency management plan to adapt against identified hazards?
• Does the project promote circular economy approaches and energy efficiency approaches (such as water, waste recycling etc.)?
• Does the project have any climate insurance in place?
• Does the project design include measures to reduce GHG emissions?
• Does the project design include measures to reduce air pollution?
• Are there any plans in place to modulate GHG and/or carbon loading?
• Does the project have identified Key Performance Indicators to track the mitigation measures?
• Does the project operations periodically review the climate risks and adapt the mitigation measures based on changing climatic conditions?

4 Public health, safety and security

Is there any specific mechanism developed to handle the community health, safety and security issues in the project affected area?

5 Land acquisition and involuntary resettlement

• Does the project have any adverse impact (displacement/livelihood loss) on households?
• Is involuntary land acquisition required for the project?
• Number of Households displaced/impacted?
• Number of women displaced/impacted?
• Number of economic activities (industry, shops, markets, farming etc) getting impacted?
• Number of direct and indirect workers getting impacted? - (Project induced risk on existing workers in the project influence/ affected area getting displaced)
• Is there a proper mechanism defined by legislation or the project company to provide fair compensation to the households being displaced and/or alternative piece of land for the land acquired for project development?
• Is there any process to compensate and/or provide other economic opportunities to replace those lost?

6 Biodiversity conservation and natural resources management
• Will the project potentially impact any native, endangered, ethnospecies (locally named) or protected terrestrial and aquatic flora?
• Will the project potentially impact any native, endangered, ethnospecies (locally named) or protected terrestrial and aquatic fauna?
• Is the project area adjacent to or within any environmentally sensitive areas (Mangroves, Biosphere, Protected forest, River catchment, secondary forest etc.) that is impacted by the project?
• Are there any prevention plans/ ecological preservation measures in place to manage the risks associated with the flora?
• Is there any prevention plan in place to manage the risks associated with the fauna?
• Are any steps being taken to protect the environmental sensitive area?
• Is the plan to maintain the biodiversity area consulted with the Government?

7 Indigenous people
• Is the project design adaptive to consider the views from affected indigenous people?
• Number of indigenous people impacted?
• Number of indigenous women impacted?
• Are the indigenous people adversely affected required to be displaced or resettled?
• Number of economic activities of indigenous people (industry, shops, markets, farming etc.) being impacted?
• Does the project implement Free Prior and Informed Consent principle throughout the consultation process?
• Is there any plan to mitigate health and safety associated risks and maintain the cultural harmony of the Indigenous people?
• Is there a plan to provide for alternative housing and/or livelihood facilities and/or compensation for those displaced?
• Is there a fair and accessible mechanism defined to address the grievance of the affected indigenous people?

8 Cultural heritage and property
• Has the local community been consulted to understand the social and spiritual value of the site?
• Is there any conservation plan to maintain the existing physical attributes of the heritage site?
• Are there any set processes in place, if any new cultural heritage site or cultural artifacts are discovered during the project construction period?

3.3.2.3 Detailed format of Annual Social and Environmental Safeguards Monitoring Report

As per the IIF reporting requirement, the proponent has to provide details on the status of the implementation of those measures required by IIF in the Corrective Action Plan (CAP). However, the current format of the ASESMR does not ask
for detailed information on the implementation of the CAP. Therefore, it is recommended that IIF should prepare an extensive format for the ASESMR. This will provide IIF with a better understanding on the level of implementation of measures such as frequency of workshops, how much GHG emissions has been reduced, how many tons of waste generated was collected, treated, reused and disposed at site, how many litres of wastewater was generated, treated and disposed of, number of public consultation sessions carried out etc. The following section highlights some of the key questions that should be included in the ASESMR format.

I. GENERAL DESCRIPTION

1. Project Details
   - Project name
   - Company Name Promoter/Sponsor
   - Group Name (if any)
   - Agreement Signing Date
   - Last Date of IIF Monitoring Visit
   - Project location
   - Construction start date
   - Operation start date

2. Report Compiler
   - Date of Reporting:
   - Report Compiler, position, and unit/division
   - Signature

II. SUMMARY OF SOCIAL & ENVIRONMENTAL ASPECT OF THE PROJECT DURING THE REPORTING PERIOD

1. Project status & SEMS implementation

   Project Status
   1. Describe the latest project status during the reporting period (construction/operation).
   2. Describe changes to the design or regulations during the reporting period, if any.
   3. Describe if there is any additional construction work during the operation phase.

   SEMS implementation
   4. Describe the Organizational Structure which includes Social, Environmental, and K3 aspects.
   5. Describe the emergency situation, if any.
   6. Describe the list of grievances from the public (if any) during the reporting period along with the status of the grievances resolved.
   7. Describe all activities related to community empowerment and environmental programs during the reporting period.
   8. Describe notes on discussions - meetings with stakeholders related to Social & Environmental aspects.

2. Labor and working conditions

   Employment
   1. Describe whether there have been changes to the Employment Policy, Procedures related to working conditions during the reporting period
2. Describe the total number of employees, the number of local, national, foreign employees; number of women employees; number of dismissed and retired employees; and the number of contract employees during the reporting period.

3. Describe the list of grievances from workers (if any) during the reporting period along with the status of the grievances resolved.

**Occupational Safety and Health (K3)**

Description of OHS performance during the reporting period, including but not limited to: manhours, statistical data on accidents and PAK and work accident trends, Lost Time Frequency Rate (LTIFR), RIR (Recordable Injury Rate), calculation of losses due to accidents or PAK achievement of leading indicators (for example: K3 training, inspections, audits, K3 meetings, etc.).

### 3 Pollution prevention and reduction, and climate change

1. Records of environmental parameters that exceed the required Threshold Values, description of causes, mitigation and evaluation efforts (after implementation).
2. Yearly generation of CO₂ with decrease or increase from last year and threshold value
3. Yearly generation of GHG with decrease or increase from last year and threshold value
4. Yearly generation of CO with decrease or increase from last year and threshold value
5. Yearly generation of SO with decrease or increase from last year and threshold value
6. Yearly generation of NO with decrease or increase from last year and threshold value
7. Describe the reasons/ actions taken for increases/ decreases in the air pollution values compared to threshold
8. Records of emission measurement results (if any) during the reporting period.
9. Record of GHG (Green House Gases) calculations during the reporting period.
10. Records of energy saving programs.
11. Any equipment used in the project for reduction in air pollutants and its costing
12. Any equipment used in the project to reduce the power consumption and its costing
13. Any equipment used in the project to increase the renewable energy consumption and its costing
14. Description of the implementation of waste management (including but not limited to domestic waste, B3 waste, liquid waste, electronic waste, and others) along with records of the amount and type of waste produced, and related institutions or third parties involved to manage the waste.
15. How much qty (Kg) of the solid waste is generated in the project?
16. Compared to the threshold, is it on a higher side or lower side?
17. Any mechanisms in place to process/ manage the solid waste generated?
18. Cost incurred on the solid waste processing/ management
19. How much qty (Kg) of the hazardous waste is generated in the project?
20. Any mechanisms in place to process/ manage the hazardous waste generated?
21. Compared to the threshold, is it on a higher side or lower side?
22. Cost incurred on the hazardous waste processing
23. What is the capacity to store the liquid waste generated in the project?
24. How much of the liquid waste is generated compared to the threshold?
25. Cost employed in management of liquid waste

### 4 Public health, safety and security

1. Describe the implementation of the public/employee health program
2. Describe the security system in the project area
3. Describe the structure of the security organization and summary of training achievements including certification of security personnel

### 5 Land acquisition and involuntary resettlement
1. Describe the status of land acquisition (if any)
2. Breakdown of land area by type of initial use (agricultural, commercial, etc.)
3. Outline the conditions for land replacement
4. Describe the status of relocation
5. Describe the identification of vulnerable groups
6. Describe support for vulnerable groups

### 6 Biodiversity conservation and natural resources management
1. Describe the monitoring of biodiversity aspects and procedures as well as the implementation of natural resource management around the project
2. Biodiversity Baseline Assessment:
   a. Has a comprehensive biodiversity baseline assessment been conducted for the project area?
   b. What are the key flora and fauna species identified in the project area?
   c. Are there any endangered, threatened, or protected species present in the project area?
3. Mitigation Measures:
   a. What mitigation measures have been proposed to minimize impacts on biodiversity during the project's construction and operation phases?
   b. How is the project addressing habitat loss, fragmentation, and degradation and the cost incurred for the same?
   c. Are there any plans in place for habitat restoration or the creation of wildlife corridors?
4. Ecological Connectivity:
   a. How will the project ensure ecological connectivity within and around the project site?
   b. Are there any plans for the establishment of buffer zones or protected areas to maintain ecological connectivity?
   c. How has the project addressed potential barriers to wildlife movement, such as roads or infrastructure corridors and the cost incurred for the same?
5. Protected Areas and Sensitive Habitats:
   a. Are there any protected areas, nature reserves, or other designated conservation sites within or near the project area?
   b. How is the project avoiding encroachment or negative impacts on these protected areas and sensitive habitats?
   c. Are there any specific measures undertaken to protect critical ecosystems, such as wetlands, mangroves, or coral reefs and cost incurred for the same?
6. Stakeholder Engagement and Participation:
   a. How are local communities and relevant stakeholders involved in biodiversity conservation efforts related to the project?
b. Are there any programs in place to raise awareness and build capacity among project workers and local communities on biodiversity conservation and the cost incurred if already undertaken?

7 Indigenous people
1. Explain whether there are Indigenous Peoples/Ethnic Minorities affected at the Project site.
   a. Number of affected people (men, women and children)
   b. Area size
   c. Type of impact (individual land acquired/ common area acquired/ privacy affected / source of livelihood affected/ any other)
2. What are the measures (with costs) undertaken to minimize or mitigate impacts on indigenous people?

8 Cultural heritage and property
1. Are there any cultural heritage sites affected by the project activities?
2. Availability and implementation of procedures to manage cultural heritage around project activities;
3. Have there been any findings of cultural heritage during the reporting period?
4. Preservation and Mitigation Measures:
   a. What measures have been proposed to preserve and protect cultural heritage during the project's construction and operation phases?
   b. How has the project mitigated potential impacts on cultural heritage sites, structures, or artifacts and the cost incurred for the same?
   c. Are there any plans in place for archaeological excavations, documentation, or salvage operations?
5 Heritage Conservation Planning:
   a. Has a heritage conservation plan been developed for the project?
   b. Are there any specific guidelines or regulations that need to be followed regarding the preservation of cultural heritage?
6. Stakeholder Engagement and Community Involvement:
   a. Are there any plans for community participation in the decision-making processes regarding cultural heritage conservation?
   b. How will the project ensure the integration of traditional knowledge and practices associated with cultural heritage?
   c. How has the project proponent engaged with cultural heritage experts, local communities, or heritage organizations to ensure effective monitoring and reporting, please mention the same?
7. Training and Capacity Building:
   a. Are there any capacity-building programs in place to raise awareness and build skills among project workers and local communities regarding cultural heritage conservation?
   b. How will the project proponent ensure that construction workers and contractors are trained to handle and protect cultural heritage artifacts or structures?
   c. Are there any specific guidelines or protocols for reporting any unexpected cultural heritage discoveries during the project?

9 Gender Inclusivity
1. How many women are impacted due to the project?
2. Are employment targets established for women in construction and other sector jobs created by the project?
3. Are gender aspects regularly embedded into the minutes of meetings, workshop reports, training reports, regular checkpoints, quarterly and highlight reports, etc?

4. Is a fair and respectful violation reporting, investigation, and resolution process implemented to create an environment conducive to addressing and resolving complaints?

5. Has an O&M plan been developed to support the end users (including plans to sustain safe infrastructure, ongoing access to clean water for latrines, and sustainable, cost-effective lighting over the long term)?

6. Have gender-based gaps in women’s ability to speak up and participate been identified with a plan to support the development of confidence?
Annex

Annex 1: User Manual of Stage 1 Tool

**Screening Tool: Background, tool working and limitations**

- **Excel tool:** The Stage 1 Screening Tool is an excel based tool which assists users in the preliminary screening of a project to check the responsiveness of a project to social, cultural and climate aspects. The tool can also help identify those projects that could have the potential to be further analysed for quantification of the benefits under the Stage 2 Tool with respect to various climatic, social, and other aspects.

- **Identify areas of improvement:** This tool also enables users to identify key areas of improvements in the next stage of development for shortlisted projects.

- **Data flexibility:** This tool includes both qualitative and quantitative variables. Therefore, it would be effective even for projects with limited data.

- **Pre-calibrated tool:** This is a pre-calibrated excel based tool that does not require an advanced level of technical knowledge for operating the tool. The quick user guide below provides guidance on operating the tool.

- **Structured in question & answer format:** The user is required to provide responses to simple questions based on available project related information. Every response is scored and weighted to determine the overall project score.

- **Qualitative and quantitative assessment:** The tool uses a combination of qualitative and quantitative inputs to evaluate projects and assess their responsiveness to climate and social aspects, further identify gaps and areas of improvement by project.

- **Offers flexibility to customize:** The admin sheet in the tool allows the tool to be customizable and the user change any variable (including weightages) as required.

  - The overall project score is based on weighted aggregates of scores across 5 dimensions (called ‘parameters’). These are: 1. Vulnerability and Location Risk 2. Strategic Suitability, 3. Project Proponent’s Capacity 4. Climate and Biodiversity Risk and 5. Social Risk. Each parameter is divided into sub-parameters that contain questions about the given sub-parameter.

  - The user is expected to provide project data and respond to questions via a drop-down menu. All information provided by the user is then utilized to compute scores (between 0-5) to various parameters and their sub parameters. The output is shown in the detailed output sheet that thematically lists the details of the analysis and details the key areas of improvements in each of the sub parameters.

  - The tool can help in ascertaining whether a project can be taken up for further assessment. However, the tool cannot determine which project is to be prioritized. Furthermore, the tool cannot substantiate the information provided by the user and hence the accuracy of the analysis is directly dependent upon the accuracy of the user inputs.
Input Sheets: Project related details and responses to questions are to be provided in User Driven Input Sheets i.e., General Information and Parameter sheets.

1. General Information Sheet: This is the first sheet where the User is required to input project related information. This consists of general project related information pertaining to:
   - Name
   - Code of the project as per IIF
   - Current status
   - Sector
   - Cost of development

   This sheet also gathers specific project information on the following aspects:
   - **Location of the project**: To assess the risk as per location and multiplier for the same is added
   - **Environmental risk**: As per SEDD and multiplier is assigned as per the risk matrix
   - **Project specific risk**: As per project's ability to tackle risk and vulnerabilities through
     - design/physical structural components of infrastructure investment.
     - auxiliary infrastructure; and/or
     - operations and maintenance plans for the project
   - **PPP project**: Information on whether the project is a PPP project or not is captured with weightage given in case of positive response to be added to the total score

   **Snapshot of General Information Sheet**

2. Parameter Sheets: User responses to questions are organized into five parameters which are:
   - Vulnerability and location risk
   - Strategic suitability
   - Project proponent’s capacity
   - Climate risk and Biodiversity risk
   - Social risk
In the parameter sheets, the parameter is divided into sub parameters along thematic lines. At the sub parameter level, there are questions, responses to which must be selected from a drop-down box. Users will need to choose one response i.e., YES, NO, UNCERTAIN or NA.

**Snapshot of Parameter Sheet (Strategic suitability)**

**Customization Sheet**: The user can customize the tool by carrying out modifications at various levels in the admin and data analysis sheets.

**Snapshot of Customization (Administrator and Data Analysis) Sheet**

1. Customization: Admin sheet
• **Choose the Pre-requisites**: Pre-requisites are conditions that need to be met by each project in order to proceed forward with the analysis

• **Choose the Deal Breaker Conditions (DBCs)**: Potential DBCs are a set of conditions that should be either be fulfilled by a project at the prefeasibility stage; or if not fulfilled yet, then these should necessarily be fulfilled during the detailed feasibility study stage

• **Alter Parameter weights • Alter weights at Sub parameter level • Recalibrate weights at question level**
  
  *Checks are introduced at every level to ensure that the total never goes beyond or remains less than 100%.

2. **Customization: Data analysis**

  - The constraints, conditional scoring at each sub parameter level considering the responses from the user sheet is defined here
  - The variables for the redistribution of weights in case of negative response to pre-requisite questions can be changed in this sheet
  - All the formulas for analysis can be modified here
  - The general comments and key identified area comments can be modified in this sheet
  - The visualization of the user sheets and the output sheets can also be modified here

3. **Customization: Data validation**

A separate sheet is present in the tool wherein the set of responses to the various set of questions are mentioned and the data validated (drop down picks the options from the data validation tab). In case the user intends to customize and change the options of responses to the various questions, the options have to be changed both in the admin and the data validation sheet.

**Output Sheet** The output sheet presents all user inputs/responses in one place. **Snapshot of Output Sheet analysis**

- Provides summary of the overall score and parameter-wise score based on the user responses
- Highlights the areas that require improvement
- Indicates the number of questions marked Uncertain, No and N/A
- Compiles parameter - sub parameter weights and scores
- The response to each question along with user comments is displayed in the Detailed Output Sheet
- It enables verifying and checking consistency in response to questions
- Option is provided to generate the PDF of the output sheet
- The total score based on various parameter responses, multipliers as per the general information and other constraints is calculated and displayed in this sheet.
User is required to input project related information in the General Information Sheet

There are a total of eight parameter sheets which evaluates the user responses against the parameters

Each parameter is further divided into sub parameters in the respective sheets

The user is required to respond to a set of questions for every sub parameter

The responses options available to the user are

- **YES** - Score of 3, The user agrees with the question statement
- **NO** - Score of 0, The user disagrees with the question statement
- **UNCERTAIN** - Score of 1, Data and analysis may be available for this, however, response is neither a definite NO nor a definite YES
- **N/A** - Score of 0, The question does not apply to the project

Explanatory notes wherever necessary are provided in the parameter sheets. Other required information for the questions can be accessed by clicking on the sub parameter hyperlinks wherever given.

The model is pre-calibrated for default weights. If required the user can customize the tool at the following levels:

- Select the pre-requisites
- Select the Potential Deal Breakers
- Modify weights at the parameter level
- Modify weights at sub parameter level
- Modify conditional scoring and constraint variables
- Modify question weights

**Screening Tool working mechanics**

- Question wise weighted score = user response score x question weight
- Weighted average sub parameter score = sum of question wise weighted score x sub parameter weight
- Weighted average of parameter score = total weighted average of sub parameter score x parameter weight
- Overall project score = sum of weighted average of parameter scores

**Options available to the User**

- Use the Screening Tool with default settings
- The weights in the Screening Tool are pre-calibrated based on international best practices and as per discussion with IIF. User needs to fill in the sheets in the following order:

  - **Fill the General information sheet**
  - **Fill response to questions in the Parameter Sheets**
  - **Analyze results in Dashboard and Detailed Output Sheet**

- Customize the tool and use the Screening Tool

  - Select the Pre-requisites
  - Select the Potential deal breaker questions
  - Modify weights at the Parameter level
  - Modify weights at Sub Parameter level
- Modify constraints and conditions scoring
- Modify question weights

### Filling in general information

#### Snapshot of filling in general information sheet

#### Operating the Parameter Sheets

The parameter level sheets are distributed in two sections:

- **User responses based on the type of questions:** pre-requisites, normal and potential deal breakers. Based on the response, the sheet itself changes as some questions get "masked" and weights among the questions/sub-parameters get redistributed among only the applicable questions responses.
- **The response analysis, comments, key areas to address and representation of the score.**

#### Snapshot of filling in Parameter Sheet

#### Output Sheet with analysis and result

- Options of Construction and Operations - Maintenance to choose from
- Blue highlighted questions are the pre-requisites and decision tree questions. If the response to them is No, the other questions below get shaded and response is not required on the, and weights are accordingly redistributed to the
- Red highlighted questions are the potential deal breaker questions, and they can be chosen in the admin and data analysis sheet
- Options of Yes, No, Uncertain and NA to choose as response to questions in the dropdown
Snapshot of Output Sheet with analysis and result

- **Parameter level results** are displayed on a real-time basis in the output section on the top.

- **Speedometer** displays overall score of the Parameter.

- **Questionnaire** - List of questions to be answered by the user.

- **User will need to fill responses to the questions in the input section below the output Section.**

- **Overall Comment Box** - Displays an overall recommendation on the Parameter.

- **Note** - Displays guidance on filling of the Sheet.

- **Warning** - Warning for addressing the response to DBCs.

- **Comments Column** - User can place their comments while responding to questions.

- **Dropdown box** - User to select responses from the dropdown.

- **Warning to address potential deal breaker questions** - More than 10.

- **Parameters level Score and Multipliers**

- **Generate PDF report** - Buttons to generate PDF output report.

- **Overall Project Comment**

- **User Response Analysis**

- **Number Questions NA and Uncertain**

- **List of Pre-requisites and Potential Deal Breakers**

- **Parameter wise snapshot**

- **Areas to strengthen**

- **Provides overall project score and related commentary.**

- **Highlights potential deal breakers.**

- **Highlights proportion of questions marked NA or uncertain.** Therefore, would require further examination and resolution.

- **Provides parameter wise snapshot.**

- **Highlights parameter wise areas to strengthen.**

- **Allows generation of output PDF report for the project.**
Customise the tool in admin and data analysis sheet: In the Administrator Sheet, the user can customise the weights of parameters and sub parameters.
- The sheet also displays the impact of the weight on the respective scores

Snapshot of Customizing the tool in admin and data analysis sheet
Pre-requisite questions: Implies the basic requirements that the project should fulfil (in Blue in tool)

- A ‘NO’ response to any of the prerequisite conditions/ decision tree questions in the parameter sheets will make various other questions not applicable including the deal breakers in the parameter sheets itself and those questions will be masked. User need not fill the responses to the masked questions.

Potential Deal Breakers highlight the basic requirements at the sub parameter level which can become a showstopper for the project (in red in tool)

- Potential Deal Breaker questions show up in the relevant parameter sheets

- Responding to these questions with ‘No/ Negative’ or ‘Uncertain’ above a predefined threshold will result in the score getting constrained for the entire project. When a user answers a Potential Deal Breaker question in the negative, a warning message will flash on the dashboard and on the respective parameter sheet.
Annex 2: Rationale for Quantifying the Benefits of E&S Measures Under the Stage 2 Tool

In this Annex, rationale, assumptions and sources of information used to estimate each of the E&S benefits (from stage 2 Tool) in monetary term are listed below.

The E&S benefit quantification ia done based on four main concepts as mentioned below:

- Benefits through avoidance of time delays leading to monetary savings
- Benefits though avoidance of penalty and damage costs
- Estimating additional benefits
- Estimation of the benefits by income generation

Benefits through avoidance of time delays leading to monetary savings

1. Setting up of S&E Team for implementation, monitoring and evaluation of SEPs

15% is taken as the average Interest and Depreciation cost (IDC) for any infrastructure project. This range of 11 -15% of IDC is supported by the feasibility reports of the assessed infrastructure projects. This value is calculated using the 15% variable on the total project construction cost. The average number of delays in any project amongst the overall delays due to environmental and social (ES) disputes are 17%. It is further assumed that 100% of the construction time delays due to ES disputes can never be avoided and to be on the optimal side, it is considered that due to application of SEMS we will be only able to avoid 60% of the ES delays. Through the aforesaid assumptions and utilizing the project construction period, we are able to arrive at the total savings on IDC/ in turn project cost due to avoidance of construction delays arising out of environment and social disputes.

Formulas:

Potential savings on IDC due to avoidance in construction delays due to resolved ES disputes = (Project construction cost / Project construction period) x (17% x (ES Disputes leading to delay in project 60% x Average construction delays in project) x IDC (As percentage of total project cost)

Potential annual savings in operational cost due to avoidance in operational delays = Operating cost as percentage of capital cost x potential savings in IDC due to avoidance in construction delays due to avoided ES disputes.

Data points collected:

- E&S disputes leading to project construction delays
- Average construction delays in any infrastructure project
- IDC as percentage of construction cost – Feasibility report of projects (Jakarta toll road project)

2. Avoidance of S&E issues by IIF’s compliance achievement

For this assessment, it is considered that compliance with environment and social mitigation measures ensure the timely completion of projects. This could be considered as savings through the avoidance of expense due to delays in construction and operations of the project. This avoidance of expense is considered an economic benefit for the given project. The project rating from IIF evaluates compliance on identified E&S parameters. The higher the rating the better the compliance. It is assumed that with full compliance, the project will achieve 75% of the overall potential savings due

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5 Managing PPP contracts after financial close by GI HUB and T&T - https://managingppp.github.org/report
6 Detailed study by Construction World on delays in Infra Projects - Why the delay in infrastructure projects?: A detailed study (constructionworld.in)
7 Feasibility Report (Jakarta Toll Road project)
to avoided ES disputes, followed by 50% and 25% per medium compliance and non-compliance. This methodology was agreed in discussion with IIF.

**Formulas:**

Assumption for potential savings through avoidance of ES issues x Percentage of savings as per IIF compliance achievement x Potential savings on IDC due to avoidance in construction delays due to avoided ES delays.

**Data points:**

- ES disputes leading to project construction delays
- Average construction delays in any infrastructure project
- IDC as percentage of construction cost – Feasibility report of projects (Jakarta toll road project)

3. Improved labour relations due to having a robust grievance redressal mechanism

As mentioned above, it is considered that average delays in any project amongst the overall delays due to environmental and social disputes are 17%. Further, it is assumed that out of 17%, 50% of the delays are due to the social disputes and remaining are due to environmental disputes. Further, it is assumed that 50% of the social disputes are due to labour grievances not being sorted out in a timely manner. The above assumptions are then combined to arrive at the total savings arising out of labour grievances being resolved in a timely manner in terms of IDC cost escalation and project cost escalation avoidance.

**Formulas:**

Assumption for time delay due to ES disputes x Assumption for only social disputes leading to time delay x Assumption for labour grievances in social disputes leading to delay x Average construction delays in terms of number of days for infrastructure project x Potential savings on IDC in project due to avoidance in construction delays due to resolved

**Data points:**

Same points as mentioned in point 1 and 2 are used

4. Ease of land acquisition and avoidance of project delays due to community engagement and stakeholder consultations

It is assumed that average delays in any project amongst the overall delays due to environmental and social disputes are 17%. Further, it is assumed that out of 17%, 50% of the delays are due to social disputes and the remaining are due to environmental disputes. The time delays and project cost escalation avoided by resolution of social disputes due through community engagement and stakeholder consultations are used to arrive at the economic benefits in this case.

**Formulas:**

Assumption for time delay due to ES disputes x Assumption for only social disputes leading to time delay – Cost incurred for stakeholder consultations and community engagement

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6 Managing PPP contracts after financial close by GI HUB and T&T - https://managingppp.gihub.org/report
7 Detailed study by Construction World on delays in Infra Projects - Why the delay in infrastructure projects?: A detailed study (constructionworld.in)
8 Feasibility Report (Jakarta Toll Road project)
9 Managing PPP contracts after financial close by GI HUB and T&T - https://managingppp.gihub.org/report
Data points:
Same points as mentioned in point 1 and 2 are used

5. Conflicts avoidance due to consultation with stakeholders (Indigenous people)

It is assumed that average delays in any project amongst the overall delays due to environmental and social disputes are 17%.$$^{12}$$ Further, it is assumed that out of 17%, 50% of the delays are due to social disputes and the remaining are due to environmental disputes. The time delays and project cost escalation avoided by resolution of social disputes due to the community engagements and stakeholder consultations are used to arrive at the economic benefits in this case. As no information was available from the proponent on how many IP were involved in community engagements and consultations specifically, the result obtained is further assessed in the same ratio as of the IP to the total number of people affected by the project.

Formulas:

$$\text{(Assumption for time delay due to ES disputes x Assumption for only social disputes leading to time delay – Cost incurred for stakeholder consultations and community engagement) x Ratio of IP to the total number of people impacted by the project.}$$

Data points:
Same points as mentioned in point 1 and 2 are used.

Benefits through avoidance of penalty and damage costs

1. Reduced violations and adverse impacts to environment due to better monitoring regime

IIF collects the number of environmental disputes resolved in the project which is used as an input variable to calculate the overall penalty avoided by resolving environmental disputes. The median penalty value as per the Government of national law for environmental protection and management (32/2009) is used for calculating the benefits gained by avoiding the penalty.

Formulas:

$$\text{Median value of penalty per environmental issue avoided by complying to the regulations x Number of environmental issues resolved in the project.}$$

Data points:
- Number of environmental disputes resolved in the project – provided by proponent
- Penally avoided by resolving/ avoiding environmental issues in the project$$^{13}$$

2. Waste reduced, avoided, reused and recycled annually

The per capita damage cost pertaining to health and related illness, environmental issues due to non-management of solid waste generated in a project i.e., 106 USD/ Per Capita is considered to be avoided for reusing and recycling the solid waste. The same is then clubbed with the number of people affected in the project. The cost incurred for solid waste management in the project is removed from the overall benefits to arrive at the final set of accrued benefits.

$$^{12}$$Managing PPP contracts after financial close by GI HUB and T&T - https://managingppp.github.org/report

$$^{13}$$Environmental Protection and Management Law 32/2009 - 09 November 2010 (11).pdf (fao.org)
3. Hazardous waste treated annually
The per capita damage cost pertaining to health and related illness, environmental issues due to non-management of solid waste generated in a project i.e., 106 USD/Per Capita is considered to be avoided for reusing and recycling the solid waste. The same is then clubbed with the number of people affected in the project. This value is then rationed in the same percentage as that of hazardous waste generated to the total waste generated in the project. The cost incurred for hazardous solid waste management in the project is removed from the overall benefits to arrive at the final set of accrued benefits.

Formulas:
Damage cost avoided per capita by waste management and recycling in the project x Total number of people affected by the project x Percentage of Hazardous waste to the total waste generated in project.

Data points:
- Number of people affected by the project (provided by proponent)
- Damage cost per capita for health and illness due to no waste management
- Damage cost per capita for environmental issues due to no waste management

4. GHG emissions reduced annually
The economic health and environmental benefit per tonne of reduction in GHG emission of 66.5 USD is multiplied with the GHG emission reduction achieved in the project calculates the overall benefits.

Formulas:
Damage cost avoided per tonne by attaining GHG emission reduction in the project x GHG emission reduction achieved in the project.

Data points:
- Health and Environmental Benefit per tonne of GHG emission reduction
- GHG emission reduction achieved in the project (provided by proponent)
5. **Water recycled and reused annually**

The cost of using per cubic meter of water in the project i.e., water tariff (1.15 USD) is multiplied with the total water recycled and reused in the project. The Opex cost incurred in managing the equipment for water treatment is subtracted from the benefits to arrive at the overall benefits for this variable.

**Formulas:**

\[
\text{Water tariff for per cubic meter of water usage} \times \text{total water recycled and reused in the project.}
\]

**Data points:**

- Total water recycled and reused in the project (provided by proponent)
- Water Tariff\(^{19}\)

6. **Air pollution reduced annually**

The damage costs for the CO2, CO, NO and SO i.e., 0.01 USD, 2.43 USD, 4.09 USD, 0.01 USD is multiplied with the reduction achieved in the project for the aforesaid. The damage cost avoided is thereby derived to evaluate the accrued benefits.

**Formulas:**

\[
\text{Damage cost for air pollution by various pollutants (CO2, CO, NO, SO)} \times \text{Total air pollutants reduced in the project.}
\]

**Data points:**

- Total air pollutants reduced in the project – Provided by Proponent
- Damage cost for air pollution\(^{20}\)

7. **Noise pollution reduced annually**

Cost of noise pollution prevention on health and environment per capita per decibel of 84 USD is used in conjunction with the noise pollution reduction achieved in the project due to the application of noise pollution reduction measures such as sound barriers. The cost of the reduction measures is reduced from the benefit calculated to arrive at the overall actual benefits.

**Formulas:**

\[
\text{Damage cost of noise pollution} \times \text{Total noise pollution reduction achieved in the project} – \text{Cost of measures used for achieving the noise pollution reduction.}
\]

**Data points:**

- Total noise pollution reduced in the project (provided by proponent)
- Cost of noise pollution prevention on health and environment\(^{21}\)

---

\(^{19}\) Information on water tariff - Water supply and sanitation in Indonesia

\(^{20}\) Damage costs for air pollution (Environmental cost assessment for improved scenario) - (PDF) Environmental costs assessment for improved environmental-economic account for Indonesia (researchgate.net)

\(^{21}\) Health impacts of environmental noise - Noise & Health – Valuing the Human Health Impacts of Environmental Noise Exposure (nationalarchives.gov.uk)
8. Water pollution avoided due to treatment of wastewater

The penalty cost related to non-treatment of wastewater generated in the project and releasing the same in the project vicinity is avoided by treating the wastewater generated is considered as the cumulative benefit for this variable.

Formulas:

Penalty cost for non-treatment of wastewater in the project.

Data points:

▪ Penalty cost for non-treatment of wastewater in the project

9. Flora saved or preserved

Penalty cost per hectare for illegal removal of flora in the project affected area that is avoided is used in conjunction with the area occupied by flora in the project to arrive at the benefits.

Formulas:

Penalty cost for per hectare for illegal removal of flora x Area occupied by flora in the project.

Data points:

▪ Area occupied by flora in the project (provided by proponent)
▪ Penalty cost per hectare for illegal removal of flora

10. Fauna saved or preserved

The type of the fauna present in the project area and the penalty cost avoided by maintaining the living conditions and management of the fauna species in the project area (rare and protected species under the list prepared by Ministry of Environment and Forestry, species that are not in the list) is taken as the overall benefit for the fauna preserved in the project.

Formulas:

Penalty cost for illegal trafficking of fauna as per specie type

Data points:

▪ Penalty cost for illegal trafficking as per fauna specie type

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22Environmental Protection and Management Law 32/2009 - 09 November 2010 (11).pdf (fao.org)
23 IIF VC Tool on Biodiversity for flora
11. Ecosystem improvements

The contribution to the GDP by the overall ecosystem (Agriculture, Marine and Fisheries) of Indonesia i.e., 133,500\$ million USD\textsuperscript{26} is divided by the overall agriculture, marine and fisheries cover (area) of Indonesia i.e., 120.50 million Ha\textsuperscript{27} to arrive at per ha contribution to the GDP. The same ratio is used for calculation of the project ecosystem contribution to the GDP. The contribution is taken as the overall benefits generated by the project ecosystem.

Formulas:

<table>
<thead>
<tr>
<th>Ratio of GDP contribution by overall ecosystem and area ecosystem in Indonesia x Area of ecosystem in the project affected area</th>
</tr>
</thead>
</table>

Data points:

- Contribution to the GDP of Indonesia by ecosystem\textsuperscript{28}
- Area of ecosystem in Indonesia\textsuperscript{29}
- Area of Project ecosystem (provided by proponent)

12. Due to avoidance of invasive alien species

The cost of invasive alien species management per hectare i.e., 660 USD is used in conjunction with the total area that could have been destroyed by the invasive alien species in the project (Coverage of project area with native species) to arrive at the economic benefit.

Formulas:

<table>
<thead>
<tr>
<th>Cost of invasive alien management per hectare x Coverage of project area with native species</th>
</tr>
</thead>
</table>

Data points:

- Cost of invasive alien species management\textsuperscript{30}
- Coverage of project area with native species (provided by proponent)

13. Carbon absorption potential of biodiversity area

The per hectare cost of the carbon sequestration value i.e. 758.1 USD is used in conjunction with the total preserved area within the project to arrive at the benefit.

Formulas:

<table>
<thead>
<tr>
<th>Cost of carbon sequestration value x Preserved area in the project</th>
</tr>
</thead>
</table>

Data points:

- Cost of carbon sequestration value\textsuperscript{31}
- Total preserved area within the project (provided by proponent)

\textsuperscript{26} Contribution to the GDP by ecosystem (WB) - https://data.worldbank.org/indicator/NV.AGR.TOTL.CD?locations=ID
\textsuperscript{27} Area of ecosystem (Indonesia) from Statista - www.statista.com
\textsuperscript{28} Contribution to the GDP by ecosystem (WB) - https://data.worldbank.org/indicator/NV.AGR.TOTL.CD?locations=ID
\textsuperscript{29} Area of ecosystem (Indonesia) from Statista - www.statista.com
\textsuperscript{31} Article on valuation of carbon sequestration value - Estimation and Economic Valuation of Above-Ground Carbon in Forest Area with the Special Purpose of Gunung Bromo, Karanganyar, Central Java, Indonesia | Jurnal Sylva Lestari (unila.ac.id)
Estimating additional benefits

1. Deploying sustainable construction technology in the project

There is a direct benefit generated for deploying sustainable construction technology in the project. The cost of material and construction saved by employing nature-based solutions instead of conventional technology is directly fed in the input sheet of the tool by the proponent to arrive at the benefit accrued. For example, usage of stone and earth pitching instead of RCC for water canal in hydropower projects. The stone and earthen pitching is a nature-based solution and reduces the overall cost of construction compared to conventional methodology.

Formulas:

Cost saved by employing nature-based solution instead of conventional technology in the project

Data points:
- Savings by employed nature-based solutions (Different for different projects) (provided by proponent)

2. Energy saved annually

The total energy saved in the project by application of renewable energy mechanisms as well as intelligent lighting systems is considered here with the tariff of electricity (0.07 – 0.09 USD/ KwH) in the project location to arrive at the economic benefits generated for saving energy in the project.

Formulas:

Total conventions energy saved in the project by employing renewable energy mechanism or intelligent lighting systems x Energy Tariff

Data points:
- Total energy saved in the project (provided by proponent)
- Energy tariff

3. Reduced labour OHS hazards due to employment of OHS measures in the project

The overall return of 2.2 on the cost employed for prevention of health and safety hazards in the project by application of OHS measures is used. This multiplier of the return is then applied in conjunction with the total expenditure in the project for the OHS measures implementation in order to arrive at economic benefit.

Formulas:

Return on the cost employed for OHS measures in the project x Expenditure on the OHS measures applied in the project

Data points:
- Multiplier for return on cost employed for OHS measures
- Total expenditure for application of OHS measures (provided by proponent)

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32Electricity tariff in Indonesia - Indonesia electricity prices, March 2023 | GlobalPetrolPrices.com
4. Savings due to using a traffic management plan in the project

For this, we could not gather any report or study and a direct credit multiplier of 0.2 is applied on the overall benefits accrued by application of SEMS framework on the project. The overall multiplier of OHS measures is 2.2 and traffic management also forms part of the OHS measures. Since there is no direct cost also available for employing the traffic management measures, we created a mechanism of taking 10% of the 2.2 multiplier and using it as a credit multiplier for the overall benefit to arrive at the benefit under this case.

Formulas:

<table>
<thead>
<tr>
<th>Multiplier for the benefit arrived at the cost employed for traffic management</th>
</tr>
</thead>
</table>

Data points:

- Total benefits accrued by applying SEMS framework – Post calculation of tool 2 benefits

5. Social return to IP in terms of sentimental and emotional wellbeing depending on the cost of conservation of cultural heritage

As per the desk research, every dollar spent on the conservation of cultural heritage brings additional 7.5% social return in terms of sentimental and emotional wellbeing on the cost employed for conservation of cultural heritage. The benefit is achieved by employing additional 7.5% on the cost incurred for the conservation. The benefit accrued is adjusted in the same ratio as of the IP to the total number of projects affected people to arrive at the benefits to the IP.

Formulas:

<table>
<thead>
<tr>
<th>(Social return on conservation of cultural heritage x Total expense on the conservation of cultural heritage in project area) x Total IP/ Total number people in the project affected area</th>
</tr>
</thead>
</table>

Data points:

- Social return on conservation of cultural heritage
- Expense on conservation of cultural heritage (provided by proponent)
- Total number of IP to the total number of people in the project affected area (provided by proponent)

6. Social return in terms of sentimental and emotional wellbeing depending on the cost of conservation of cultural heritage

Based on desk research, every dollar spent on the conservation of cultural heritage brings additional 7.5% social return in terms of sentimental and emotional wellbeing. The benefit is arrived by employing additional 7.5% on the cost incurred for the conservation of cultural heritage.

Formulas:

<table>
<thead>
<tr>
<th>(Social return on conservation of cultural heritage x Total expense on the conservation of cultural heritage in project area)</th>
</tr>
</thead>
</table>

Data points:

- Social return on conservation of cultural heritage

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Expense on conservation of cultural heritage (provided by proponent)

**Estimation of the benefits through income generation**

**1. Through direct and indirect office jobs created for women within the project influence area**

The average wage of the people based on the project location is taken from the reference report and study. This average wage for people working in office is multiplied by the total number of women working in office. The multiplier of the pay gap for women is added to the total income generated by women working in office to arrive at the benefit.

**Formulas:**

\[
\text{Average wage of people based on location} \times \text{Number of women working in office} \times \text{Pay gap for women}
\]

**Data Points:**

- Average wage of people as per the location of the project\(^{36}\)
- Pay gap for women\(^{37}\)
- Number of women working in the office (provided by proponent)

**2. Through direct and indirect office jobs created for men within the project influence area**

The average wage of the people based on the project location is taken from the reference report and study. This average wage for people working in office is multiplied by the total number of men working in office to arrive at the benefit.

**Formulas:**

\[
\text{Average wage of people based on location} \times \text{Number of men working in office}
\]

**Data Points:**

- Average wage of people as per the location of the project\(^{38}\)
- Number of men working in the office (provided by proponent)

**3. Provision of livelihood support/ jobs to construction labourers (women)**

The average wage of the construction labourers working in Indonesia is taken from the reference report/ study. This average wage is multiplied with the total number of women construction workers engaged in the project. The multiplier of the pay gap for women is added to the total income generated by women construction workers working in the project to arrive at the benefit.

**Formulas:**

\[
\text{Average wage of construction labourers} \times \text{Number of women labourers} \times \text{Pay gap for women construction labourers}
\]

**Data Points:**

- Average wage of construction labourers working in Indonesia\(^{39}\)

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\(^{36}\)https://www.asiabriefing.com/countryguide/indonesia/human-resources-and-payroll/minimum-wage


\(^{38}\)https://www.asiabriefing.com/countryguide/indonesia/human-resources-and-payroll/minimum-wage

\(^{39}\)Average Salary of construction labourers in Indonesia - https://www.averagesalarysurvey.com/construction-labor-worker/indonesia#:~:text=Average%20salary%20for%20Construction%20Worker%20in%20Indonesia%2C%20year.%20The%20most%20typical%20earning%20is%20$3050.00IDR.
4. **Provision of livelihood support/ jobs to construction labourers (men)**

The average wage of the construction labourers working in Indonesia is taken from the reference report/study. This average wage is multiplied with the total number of men construction workers engaged in the project to arrive at the benefit.

**Formulas:**

\[
\text{Average wage of construction labourers} \times \text{Number of men labourers}
\]

**Data Points:**

- Average wage of construction labourers working in Indonesia
- Number of men construction labourers working in the project (provided by proponent)

5. **Through direct and indirect jobs created for women (Indigenous people)**

The average wage of the people based on the project location is taken from the reference report and study. This average wage for people working in office is multiplied by the total number of women IP working in office. The multiplier of the pay gap for women is added to the total income generated by women IP working in office to arrive at the benefit.

**Formulas:**

\[
\text{Average wage of people based on location} \times \text{Number of IP women working in office} \times \text{Pay gap for women}
\]

**Data Points:**

- Average wage of people as per the location of the project
- Pay gap for women
- Number of IP women working in office (provided by proponent)

6. **Through direct and indirect jobs created for men (Indigenous people)**

The average wage of the people based on the project location is taken from the reference report and study. This average wage for people working in office is multiplied with the total number of men IP working in office to arrive at the benefit.

**Formulas:**

\[
\text{Average wage of people based on location} \times \text{Number of men working in office}
\]

**Data Points:**

- Average wage of people as per the location of the project
- Number of IP men working in office (provided by proponent)

---

40 Pay gap for women statistics BNP Statistics
41 Average Salary of construction laborers in Indonesia - https://www.averagesalarysurvey.com/construction-labor-worker/indonesia#:~:text=Average%20salary%20for%20Construction%20Worker%20in%20Indonesia%2C%20year.%20The%20most%20typical%20earning%20for%20Construction%20Worker%20is%20104%2C343%2C050%20IDR.
42 Minimum salary of people as per province - https://www.asiabriefing.com/countryguide/indonesia/human-resources-and-payroll/minimum-wage
44 Minimum wage for people as per province - https://www.asiabriefing.com/countryguide/indonesia/human-resources-and-payroll/minimum-wage
7. Through conservation of Indigenous people’s cultural heritage

An economic return of 16% on the cost employed for conservation of cultural heritage over the construction period is taken from the reference report/ study. This assumption is used in conjunction with the actual cost employed for the conservation of cultural heritage to arrive at the benefits.

Formulas:

\[
\text{Economic return on the cost employed for conservation of cultural heritage} \times \text{Cost employed for conservation of cultural heritage}
\]

Data Points:

- Economic return on the cost employed for the conservation of cultural heritage\(^{45}\)
- Cost employed for conservation of cultural heritage (provided by proponent)

8. Through direct and indirect jobs created for women due to cultural heritage

The average wage of the people based on the project location is taken from the reference report/ study. This average wage for people working in the office is multiplied by the total number of women who worked for conservation of cultural heritage. The multiplier of the pay gap for women is added to the total income generated by women to arrive at the benefit.

Formulas:

\[
\text{Average wage of people based on location} \times \text{Number of women worked towards conservation of cultural heritage} \times \text{Pay gap for women}
\]

Data Points:

- Average wage of people as per the location of the project\(^{46}\)
- Pay gap for women\(^{47}\)
- Number of women worked towards conservation of cultural heritage (provided by proponent)

9. Through direct and indirect jobs created for men due to cultural heritage

The average wage of the people based on the project location is taken from the reference report and study. This average wage for people working in office is multiplied by the total number of men working in office to arrive at the benefit.

Formulas:

\[
\text{Average wage of people based on location} \times \text{Number of men worked for conservation of cultural heritage}
\]

Data Points:

- Average wage of people as per the location of the project\(^{48}\)


\(^{46}\)Minimum wage for people as per province https://www.asiabriefing.com/countryguide/indonesia/human-resources-and-payroll/minimum-wage


\(^{48}\)Minimum wage for people in Indonesia as per province - https://www.asiabriefing.com/countryguide/indonesia/human-resources-and-payroll/minimum-wage
- Number of men worked towards conservation of cultural heritage (provided by proponent)

10. **Through increased visitors to the cultural heritage site due to its preservation**

   An economic return of 16% on the cost employed for conservation of cultural heritage over the construction period is taken from the reference report/study. This assumption is used in conjunction with the cost employed for the conservation of cultural heritage (manpower, material, research and training) to arrive at the benefits.

   **Formulas:**

   \[
   \text{Economic return on the cost employed for the conservation of cultural heritage} \times \text{Cost employed for conservation of cultural heritage}
   \]

   **Data Points:**

   - Economic return on the cost employed for the conservation of cultural heritage\(^49\)

Cost employed for conservation of cultural heritage (provided by proponent)

Annex 3: User Manual of Stage 2 Tool

Background

- The Stage 2 tool is an excel based tool which assists users in the analysis of projects for the quantification of the annual benefits arising through the application of the SEMS framework in climatic, social, and other aspects in the project.
- This tool also enables users to identify key data points which need to be captured in order to make the tool better assess the project better for benefit quantification.
- This tool can assist business decision makers in understanding the economic benefits arising out of the project by complying with the SEMS framework. It can help them understand the business benefits over the long run of the project’s operations hand in hand with the environmental benefits.

Who can benefit from this Quantification Tool?

- The tool quantifies the incremental benefits arising from specific S&E considerations such as Climate Resilience/Adaptation, Gender, Cultural Heritage, Biodiversity and Ecosystem Services, and Indigenous Peoples; and hence will be useful for both financiers and project assessors in assessing the overall benefit arising out of the project from the compliance to SEMS framework.
- This tool can also be used by the relevant ministry to highlight the important contributions of projects in terms of social and environmental benefits.

Key features of Stage 2 Tool

- **This tool includes mostly quantitative variables with a few quantitative aspects:** The tool is best applied to those projects that have sufficient data, typically the level of ESIA Reports, Annual operational reports, Corrective Action Plans or an initial business case assessment documentation.
- **Pre-calibrated tool:** This is a pre-calibrated excel based tool that does not require an advanced level of technical knowledge for operating the tool. The quick user guide provides guidance on operating the tool.
- **Structured in a question and answer format:** The user provides responses to simple questions based on available project related information. Every response is in terms of project metrics that is further multiplied with the relevant macroeconomic variable derived through desk research and reports to generate the economic value pertaining to the benefits due to application of the SEMS framework in the project.
- **Qualitative and quantitative assessment:** The tool uses a combination of qualitative and quantitative inputs to evaluate projects for the quantification of benefits.
- **Offers flexibility to customize:** The Admin sheet, Macro economic variables sheet and Data analysis sheet in the tool allows the tool to be customized, change any variable or update any variable as required later.

How it works

- The Stage 2 quantification tool is the next stage after the screening tool which assesses a project based on its responsiveness to social and climate risks.
- Those projects which ranked higher in the screening tool and were undertaken for development are now assessed for their contribution to the economy, through a focus on their social and environment aspects based on the calculation of incremental benefits arising out of compliance of the projects to IIF’s SEMS framework during project development and implementation.
• The different portfolio projects that were assessed can be compared for the incremental economic benefits arising out of them.

• The annualized project benefit is based on an aggregate of annual economic benefits from each of the categories by application of the SEMS framework (based on SEP). These are:
  
  o Strategic Interventions (SEP 1)
  o Social Factors (Labor and Working Conditions) (Sep 2)
  o Climatic Factors (SEP 3)
  o Safety of People (SEP 4)
  o Social Factors (Land acquisition and Involuntary resettlement) (Sep 5)
  o Biodiversity Conservation and natural resources management (SEP 6)
  o Indigenous People (SEP 7)
  o Cultural Heritage (SEP 8).

• Quantification tool (stage 2 tool) working mechanics
  
  o Question wise input (Input sheet) = User response
  o Benefit due to each parameter under each Category-SEP (Project Benefit Sheet) = Based on calculations (User response x Macroeconomic variable for the particular benefit)
  o Annualized/ Overall Project Benefit due to application od SEMS framework = Sum of individual benefits as per parameter in the respective category depicted in the Output and Dashboard sheet

• The user is expected to provide project data and respond to each of the questions in the input sheet. All information provided by the user is then utilized to compute the benefits for each of the indicators in each of the categories in the project benefit sheet. The output is shown in the detailed output and dashboard sheet that thematically lists the details of the analysis and highlights the key areas wherein data needs to be gathered for the better working of the tool and assessment of the project.

• The tool can help in comparing various projects of different sizes, costs and sectors to understand which project has generated higher economic benefits due to the application of the SEMS framework in the project both annually and overall.

• The tool cannot substantiate the information provided by the User and hence the accuracy of the analysis is directly dependent upon the accuracy of the User inputs.

**Limitations**

• This tool may include or refer to information and materials obtained by CRISIL from secondary sources that CRISIL considers reliable in preparing this tool. List of the data used, and its source are mentioned in the admin sheet under calculations for assumptions. CRISIL does not guarantee the accuracy, adequacy or completeness of any information or material contained in or referred to in the tool nor the suitability of the information.
How to Use

Getting started

When the stage 2 tool is opened, there will be a prompt (dialogue box) on the screen to enable the macros. The screenshot of the dialogue box is shown below for reference. The user should click on the enable content button to enable the macro.

Enable Macro Button

Other steps to be followed are explained in the trouble shooting section that needs to be followed prior to operating the tool.

The tool has three main components:

- **Input (input sheet)** whereby the user has to input data based on the information asked.

- **Customisation (Admin Sheet – all the assumptions are listed here, Data Analysis sheet (All the computation formulas are listed here) and Macroeconomic variable sheet (All the macroeconomic variables calculated based on the assumptions used in the computation are listed here). These are the sheets wherein the user can customise or update the formulas, assumptions etc.**

- **Output (Project Benefit sheet and output sheet) – the results of the incremental benefits of each input per SEP are listed here.**

Various tabs of Stage 2 tool

- **Input Sheet**
  
  - The Input Sheet is where the user should input the responses to the respective questions in the allocated space provided.

  - There are a total of 6 categories which evaluate the user responses against the multiple parameters as mentioned in the data analysis and project benefits sheet.

  - The user is required to respond to a set of questions segregated as per Category-SEP in the input sheet.
- Responses by the user would cover details such as costs for various project parameters, numbers of various events such as environmental and social violations, and textual input such as Province name etc.

- There are inputs required by the user in terms of yes/no pertaining to the triggering of respective SEP of the project being assessed.

- Explanatory notes are provided in the input sheet. There are question mark symbols present in front of each input question. Users can click on the question mark to display the explanatory note. This explanatory note will bring more clarity to the user on what is being asked in the question and from where the data can typically be sourced to respond to the input question.

- In case of unavailability of data for any input question, zero should be entered as a response to that particular question and that will be reflected in the results/output sheet.

**Input Sheet**

<table>
<thead>
<tr>
<th>Input used in the admin sheet for calculation of Macroeconomic variables</th>
<th>Click on the question mark symbol to get more information on the input required</th>
<th>Select the kind of financing done by IIF in the project being assessed (Dropdown)</th>
</tr>
</thead>
</table>
| **Input Sheet**
These are questions where response are required from users. These inputs might not appear relevant to the particular SEP in this sheet but the benefits calculated out of these inputs correspond to the particular relevant SEP in the project benefit sheet.
Fill in 'No' in the column if corresponding response cell is empty. In case of unavailability of data for the particular input required.
Fill in 'Yes' in the column if there is some related cell, select from dropdown in case the particular SEP is not getting triggered for the particular project based on the assessment.
Project Name: Please select from dropdown in case the project by IIF involves leasing to Capital investment/Working Capital/Operational Financing, Guarantee or Bond insurance.

**Social Interventions - SEP 1**

- In the particular Category or SEP getting triggered for the project being analysed
  - Total project construction cost
  - Project construction period
  - Total years of project operation/row
  - Number of environmental violations noticed in the project
  - Compliance assessment result for the S&ME measures in the project
  - Monetary benefit by application of the nature based solution in the project compared to conventional methodolgy

**Social Factors (Labor and Working Conditions) - SEP 2**

- In the particular Category or SEP getting triggered for the project being analysed
  - Province in which project is located
  - Total Men working in office in the last year
  - Total Women working in office in the last year
  - Total construction labour's (men) working in the Project in the last year
  - Total construction labour's (men) working in the Project in the last year

**Climate Factors - SEP 3**

- In the particular Category or SEP getting triggered for the project being analysed
  - Number of people affected by the project
  - Waste treatment cost incurred in the project in the last year
  - % hazardous waste to the total solid waste generated in the project in the last year
  - Treatment cost of the hazardous waste treated/removed in the last year

Response pertaining to project related information
User response as NO in case of Category/SEP being not triggered
• **Contribution by the project to SDG and NDC indicators** – The user is required to input the contribution of the project to SDG and NDC indicators. The user should fill in absolute values as response to the particular indicators under SDG and NDC tabs as per the metrics mentioned against the indicator.

• Model is pre-calibrated for three cases:
  
  o Zero as a response due to the unavailability of data for the particular input question
  
  o When a particular SEP category is not getting triggered for the project being assessed and the user responds “No” to the question, the various input questions corresponding to the particular SEP are removed from the input sheet and the results are also updated accordingly.
  
  o The kind of financing provided by IIF to the project, i.e. For Capital Investment – Construction, Refinancing, Operational Financing or Bonds

• In case the project does not trigger a particular SEP or category, that also needs to be mentioned in the designated cell on the input sheet and the economic benefits will be calibrated accordingly.
- The response sheet highlights and covers all the respective questions in case the particular Category/ SEP is not triggered, and the input is by default taken as zero.

**Customization: Default and custom settings**

- **Default assumptions and setting:** The assumptions for the calculation of macroeconomic variables and project benefits are listed in the admin sheet. These assumptions are based on international best practices and various available studies and research. References of the assumptions used are also mentioned in the column corresponding to the assumption.

- **Custom setting: users with admin rights can customize the tool in four ways:**
  - Edit and finalize the input sheet questions in the admin sheet
  - Update and edit the assumptions in the admin sheet
  - Finalize the variables in the Macroeconomic Variables sheet
  - Finalize the formulas in the Data Analysis sheet

**Customization: Admin Sheet**

The Admin Sheet allows users with admin rights to customize the tool in the following ways:

- **Edit the Questions and Remarks:** The questions and the corresponding remarks for information on responding to the questions can be listed and updated here.

- **Assumptions and Calculations based on assumption for Macroeconomic variables:** All the data that is captured from secondary sources and various reports is mentioned here along with the reference links. These variables can be updated as and when required. The Macro-economic variables are developed through multiple assumption-based calculations in the admin sheet.

- **SDG and NDC inputs to the target:** Placeholders are mentioned to input the contribution of the project to SDG and NDC indicators. The target values are not mentioned as they are not available and only percentage growth is available, so the absolute values mentioned by the assessor can be taken as contribution to the target.

**Admin Sheet**

- **Assumptions for development of Macroeconomic variables (These can be updated as per requirements) - Yellow highlighted cells can be customized**

<table>
<thead>
<tr>
<th>Description</th>
<th>Formula</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Project Cost (in US $)</td>
<td>Total Project Cost (in US $)</td>
<td></td>
</tr>
<tr>
<td>IDC at 18% of TPC (General Thurb rule)</td>
<td>IDC at 18% of TPC (General Thurb rule)</td>
<td></td>
</tr>
<tr>
<td>Date/due to Environmental and Social issues</td>
<td>Date/due to Environmental and Social issues</td>
<td></td>
</tr>
<tr>
<td>Average construction delays in infrastructure projects (days)</td>
<td>Average construction delays in infrastructure projects (days)</td>
<td></td>
</tr>
<tr>
<td>Average days of construction delay due to Environmental and Social issue</td>
<td>Average days of construction delay due to Environmental and Social issue</td>
<td></td>
</tr>
<tr>
<td>Project construction period</td>
<td>Project construction period</td>
<td></td>
</tr>
<tr>
<td>Potential savings on interest and depreciation due to avoidance of ES disputes</td>
<td>Potential savings on interest and depreciation due to avoidance of ES disputes</td>
<td></td>
</tr>
<tr>
<td>Average per year operations cost for an energy project as % of construction cost</td>
<td>Average per year operations cost for an energy project as % of construction cost</td>
<td></td>
</tr>
<tr>
<td>Gas Energy/annual savings on account of operations due to avoidance of ES disputes</td>
<td>Gas Energy/annual savings on account of operations due to avoidance of ES disputes</td>
<td></td>
</tr>
<tr>
<td>Assumption for potential savings due to settlement of DIS disputes</td>
<td>Assumption for potential savings due to settlement of DIS disputes</td>
<td></td>
</tr>
<tr>
<td>Assumption for SRG saving due to settlement of ES disputes</td>
<td>Assumption for SRG saving due to settlement of ES disputes</td>
<td></td>
</tr>
<tr>
<td>Minimum penalty for environmental aspects violation</td>
<td>Minimum penalty for environmental aspects violation</td>
<td></td>
</tr>
<tr>
<td>Maximum penalty for environmental aspects violation</td>
<td>Maximum penalty for environmental aspects violation</td>
<td></td>
</tr>
<tr>
<td>Mixture penalty for environmental aspects violation</td>
<td>Mixture penalty for environmental aspects violation</td>
<td></td>
</tr>
<tr>
<td>Assumption for avoidance of S&amp;I issues in the project due to compliance being fully achieved as per IFC assessment</td>
<td>Assumption for avoidance of S&amp;I issues in the project due to compliance being fully achieved as per IFC assessment</td>
<td></td>
</tr>
<tr>
<td>Assumption for avoidance of S&amp;I issues in the project due to compliance being partially achieved as per IFC assessment</td>
<td>Assumption for avoidance of S&amp;I issues in the project due to compliance being partially achieved as per IFC assessment</td>
<td></td>
</tr>
</tbody>
</table>

**Notes to Users: Admin Sheet, Input Sheet, Project Benefits, Output and Dashboard**
Data Validation options: The options present in the data validation or drop down of various questions of the input sheets are listed here and can be updated or edited accordingly.

Customization: Data Analysis

The Data Analysis sheet allows users with admin rights to customize the following aspects in the stage 2 tool:

- The various parameters mentioned in the project benefits are computed here in the data analysis sheet.
- Formulas for the calculation of benefits as per each parameter of the Category/SEP are listed here and the actual benefit calculations take place here.
- All the formulas for analysis can be modified here.
- The general comments/remarks for the project benefits for each of the parameters can be modified here.
- The data analysis formulas take the various inputs from admin sheets and the user input sheet to use in the formulas to arrive at the economic value.

Customization: Macroeconomic Variables

- The Macroeconomic Variable sheet is completely preset and pre-built based on the various inputs as per the data in the assumption part of the admin sheet and does not require any input.
- The variables present in the sheet need to be updated as per different timelines and the requisite timeframe for updates is mentioned in the respective column of the sheet for reference.
The admin sheet assumptions need to be updated and inherently the macro-economic variables shall be updated themselves.

**Output: Output Sheet and Dashboard Sheet**

The Output Sheet presents all user inputs and the analysis based on user responses in one place. The sheet provides the following information:

- The areas/ input questions for which data is unavailable are highlighted in red in the output sheet. This data unavailability needs to be captured in order to make the stage 2 tool work better.
- This sheet also illustrates the summary of the overall quantified benefits per SEP category based on the user responses to the questions in the input sheet.
- The sheet also highlights the input sheet questions that have become non-applicable due to the respective SEP being not triggered for the project being assessed.
- This sheet showcases the economic benefits of each SEP category in USD and IDR (Million). Also, the cumulative benefits accrued annually is shown here. Cost to benefit ratio is also compiled here.
- Responses to each of the questions in the input sheet is displayed in this sheet.
- This sheet also details the contribution of the project being assessed to the identified SDG and NDC indicators in terms of absolute values.
• This sheet enables verification and checking of consistency in response to questions of the input sheet in one place.
• An option is provided to generate the PDF of the output and dashboard sheet based on the response analysis.
• The total benefits based on various responses are calculated in the data analysis sheet and displayed in this sheet along with the detailed benefits as per each parameter in the project benefit sheet.

Reading the Output Results

Output Sheet

<table>
<thead>
<tr>
<th>Project benefits showcase as per VB requirements</th>
<th>Actualized estimated benefits in USD - Last</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Interventions - Sep 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting up of S&amp;E Team for implementation, monitoring and evaluation of S&amp;Es</td>
<td>5277</td>
<td>Avoidance of delay by resolution of EIS disputes due to presence of S&amp;E team</td>
</tr>
<tr>
<td>Reduced violations and adverse impacts to environment due to better monitoring regime</td>
<td>30000</td>
<td>Reduced environmental disputes and further avoidance of delay in project construction due to better monitoring regime</td>
</tr>
<tr>
<td>Avoided S&amp;E issues due to PPs compliance achievement</td>
<td>37897</td>
<td>Avoided EIS issues and further avoidance of delay in project construction leading to cost savings</td>
</tr>
<tr>
<td>Upage of nature based solution in the project</td>
<td>2745</td>
<td>Capital expenditure avoided by using nature based solution instead of conventional methodologies</td>
</tr>
<tr>
<td>Climate Factors - Sep 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water reduced, avoided, reused and recycled annually</td>
<td>18575</td>
<td>Penalty avoided due to treatment of solid waste generated</td>
</tr>
<tr>
<td>Hazardous waste treated annually</td>
<td>413930</td>
<td>Penalty avoided due to treatment of hazardous solid waste generated</td>
</tr>
<tr>
<td>GHG emissions reduced annually</td>
<td>2155</td>
<td>Penalty avoided due to reduction of the GHG emission compared to the threshold</td>
</tr>
<tr>
<td>Water recycled and reused annually</td>
<td>0</td>
<td>Usage of less water leading to savings</td>
</tr>
<tr>
<td>Air pollution reduced annually</td>
<td>0</td>
<td>Penalty avoided due to practices employed for curbing the air pollution and keeping within the defined standard levels</td>
</tr>
<tr>
<td>Noise pollution reduced annually</td>
<td>71476</td>
<td>Penalty avoided due to practices employed for curbing the noise pollution and keeping within the defined standard levels</td>
</tr>
<tr>
<td>Water pollution avoided due to treatment of wastewater</td>
<td>74897</td>
<td>Penalty avoided due to compliance and treatment of wastewater further not letting it mix with lake and ground water</td>
</tr>
<tr>
<td>Energy saved annually</td>
<td>132667</td>
<td>Usage of less energy leading to savings due to employment of practices leading to renewable energy usage and lesser energy usage</td>
</tr>
</tbody>
</table>

Projects can be compared here for benefits reaped out of application of SEMS

- Projects that receives higher economic benefit
- Projects with which all Categories/ SEPS triggered
- Which all benefits are 0 due to unavailability of data
Output Sheet

Project Benefit Sheet

There is a Project Benefit Sheet that also does not require any inputs and cannot be customised. It only showcases the parameter benefits quantified (results) as per the calculations undertaken in the Data Analysis Sheet. This sheet represents the benefit accruing to each parameter under the SEPs.

- Benefits related to each parameter under each SEP (Project Benefit Sheet) = Based on calculations (User response x Macroeconomic variable for the particular benefit)
Project Benefit Sheet

Troubleshooting

Macro Content

As the user opens the benefit quantification tool (stage 2 tool), the first option that appears as a dialogue box is to enable the macro content present in the macro excel based tool file. The user has to select the Enable content option that is available on the top of the first sheet of the tool. Post selection of the enable content option, the macros embedded in the tool become enabled and initiated to work.

Macro Enablement
• **Circular reference functions**

This should be kept “on” in the tool to better understand the iterative calculations being undertaken in the excel file. This particular function is checked in the formula tab of the options box in the excel file. In case it goes unchecked by default while opening the file, the user can follow the below steps to get the circular function checked in the tool.

1. Click on the File option.
2. Select the Options menu, and a dialog box will open.

**Circular Function**

![Excel Options](image)

3. Click on the Formula tab.
4. Check the Enable Iterative Calculation option.

![Excel Options](image)

5. Click OK and it’ll be done.

• **Protected view**

In case the tool opens with an unchecked protected view, the user can select the enable editing prompt in the tool as it opens and can also go to the options → Trustcenter and check the tickboxes as per the options shown in the protected view ribbon.

**Protected View**

![Trust Center](image)
### Potential source of data for input sheet

#### Sources of data for input sheet

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Input Questions</th>
<th>Documents from where the data inputs can be sought</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Project Name</td>
<td>PID/ PAM</td>
</tr>
<tr>
<td>2.</td>
<td>Please select from dropdown in case the project involves lending for Capital investment/ Working Capital, Operational Financing, Refinance or Bond Issuance</td>
<td>PID/ PAM</td>
</tr>
<tr>
<td></td>
<td><strong>Strategic Interventions - SEP 1</strong></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Is the particular Category or SEP getting triggered for the project being analysed</td>
<td>PID/ PAM</td>
</tr>
<tr>
<td>4.</td>
<td>Total project construction cost</td>
<td>PID/ PAM</td>
</tr>
<tr>
<td>5.</td>
<td>Project construction period</td>
<td>ASESMR</td>
</tr>
<tr>
<td>6.</td>
<td>Total years of project operation till now</td>
<td>ASESMR</td>
</tr>
<tr>
<td>7.</td>
<td>Number of environmental violations resolved in the project</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>8.</td>
<td>Compliance assessment result for the S&amp;E measures in the project</td>
<td>IIF assessment report</td>
</tr>
<tr>
<td>9.</td>
<td>Monetary benefit by application of the nature-based solution in the project compared to conventional methodology</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td></td>
<td><strong>Social Factors (Labor and Working Conditions) - SEP 2</strong></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Is the particular Category or SEP getting triggered for the project being analysed</td>
<td>PID/ PAM</td>
</tr>
<tr>
<td>11.</td>
<td>Province in which project is located</td>
<td>PID/ PAM</td>
</tr>
<tr>
<td>12.</td>
<td>Total Men working in office in the last year</td>
<td>ASESMR</td>
</tr>
<tr>
<td>13.</td>
<td>Total Women working in office in the last year</td>
<td>ASESMR</td>
</tr>
<tr>
<td>14.</td>
<td>Total construction laborer’s (women) working in the Project in the last year</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>15.</td>
<td>Total construction laborer’s (men) working in the Project in the last year</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td></td>
<td><strong>Climate Factors (Pollution Prevention and Abatement and Climate Change) - SEP 3</strong></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Is the particular Category or SEP getting triggered for the project being analysed</td>
<td>PID/PAM</td>
</tr>
<tr>
<td>17.</td>
<td>Number of people affected by the project</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>18.</td>
<td>Waste treatment cost incurred in the project in the last year</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>19.</td>
<td>% of hazardous waste to the total solid waste generated in the project in the last year</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>20.</td>
<td>Treatment cost of the hazardous waste treated/ recycled in the last year</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>S. No.</td>
<td>Input Questions</td>
<td>Documents from where the data inputs can be sought</td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>21.</td>
<td>GHG emissions reduced in the project in the last year</td>
<td>ASESMR</td>
</tr>
<tr>
<td>22.</td>
<td>Water recycled or saved in the project in the last year</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>23.</td>
<td>CO emissions saved in the project in the last year</td>
<td>ASESMR/ CAP</td>
</tr>
<tr>
<td>24.</td>
<td>SO emissions saved in the project in the last year</td>
<td>ASESMR/ CAP</td>
</tr>
<tr>
<td>25.</td>
<td>NO emission saved in the project in the last year</td>
<td>ASESMR/ CAP</td>
</tr>
<tr>
<td>26.</td>
<td>Noise pollution reduced in the project in the last year</td>
<td>ASESMR/ CAP</td>
</tr>
<tr>
<td>27.</td>
<td>Cost of the products/ methodology used in the project for reducing the sound pollution</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>28.</td>
<td>Amount of wastewater treated in the project</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>29.</td>
<td>Energy saved in the project</td>
<td>ASESMR</td>
</tr>
<tr>
<td>30.</td>
<td>Safety of People - SEP 4</td>
<td></td>
</tr>
<tr>
<td>31.</td>
<td>Is the particular Category or SEP getting triggered for the project being analysed</td>
<td>PID/ PAM</td>
</tr>
<tr>
<td>32.</td>
<td>Expenditure on OHS in the project during construction and operational period</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>33.</td>
<td>Is there a traffic management plan developed under this project</td>
<td>CAP/ Semiannual report</td>
</tr>
<tr>
<td>34.</td>
<td>Social Factors (Land acquisition and Involuntary resettlement) - SEP 5</td>
<td></td>
</tr>
<tr>
<td>35.</td>
<td>Is there a security management plan developed and employed for this project</td>
<td>CAP/ Semiannual report</td>
</tr>
<tr>
<td>36.</td>
<td>Biodiversity conservation and natural resource management - SEP 6</td>
<td></td>
</tr>
<tr>
<td>37.</td>
<td>Cost incurred for stakeholder consultations undertaken in the project</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>38.</td>
<td>Cost incurred on undertaking CSR engagement for betterment of social conditions for PAP and Community in the last year</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>39.</td>
<td>Is the particular Category or SEP getting triggered for the project being analysed</td>
<td>PID/ PAM</td>
</tr>
<tr>
<td>40.</td>
<td>Number of flora species</td>
<td>SEDD report</td>
</tr>
<tr>
<td>41.</td>
<td>Area of the preserved flora species in the project affected area</td>
<td>SEDD report</td>
</tr>
<tr>
<td>42.</td>
<td>Number of fauna species</td>
<td>SEDD report</td>
</tr>
<tr>
<td>43.</td>
<td>Category of fauna species (CITES/ MenLHK, not in the List)</td>
<td>SEDD report/ Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>44.</td>
<td>Forest, Agriculture and Marine cover of project</td>
<td>SEDD report/ Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>S. No.</td>
<td>Input Questions</td>
<td>Documents from where the data inputs can be sought</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>44.</td>
<td>Coverage of project area with native species</td>
<td>SEDD report/ Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>45.</td>
<td>Preserved area in Ha in project</td>
<td>SEDD report/ Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td></td>
<td><strong>Indigenous people - SEP 7</strong></td>
<td></td>
</tr>
<tr>
<td>46.</td>
<td>Is the particular Category or SEP getting triggered for the project being analysed</td>
<td>PID/ PAM</td>
</tr>
<tr>
<td>47.</td>
<td>Total Men in Indigenous People category working in the project in the last year</td>
<td>ASESMR/ Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>48.</td>
<td>Total Women in Indigenous People category working in the project in the last year</td>
<td>ASESMR/ Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>49.</td>
<td>Ratio of Indigenous People to the total of indigenous and non-indigenous people in project affected area in the last year</td>
<td>To be calculated based on aforesaid inputs</td>
</tr>
<tr>
<td>50.</td>
<td>Cost for conservation of cultural heritage</td>
<td>ASESMR/ Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td></td>
<td><strong>Cultural Heritage - SEP 8</strong></td>
<td></td>
</tr>
<tr>
<td>51.</td>
<td>Is the particular Category or SEP getting triggered for the project being analysed</td>
<td>PID/ PAM</td>
</tr>
<tr>
<td>52.</td>
<td>Total jobs created for Men due to preservation in cultural heritage in the last operational year (FY 2022- FY 2023)</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>53.</td>
<td>Total jobs created for Women due to preservation in cultural heritage in the last operational year (FY 2022- FY 2023)</td>
<td>Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
<tr>
<td>54.</td>
<td>Cost for conservation of cultural heritage (Material, Manpower, Research, Studies and Trainings)</td>
<td>ASESMR/ Specific questionnaire shared with the proponent - data point yet to be embedded in the report</td>
</tr>
</tbody>
</table>

Conclusive note

- The Stage 2 tool (Benefit Quantification tool) is a pre-calibrated tool that helps users to compare various projects to better understand which project generates more economic benefits through the application of the SEMS framework.
- This also helps users to better understand the contribution of each SEP to the economic benefits based on the annualized/ overall benefits.
- This tool provides flexibility to the users to modify questions and settings in the tool to allow customization.
- This tool also detail the contribution of the project to the SDG and NDC indicators that are listed in the input sheet.