EXPRO National Manual for Projects Management

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Project Environmental Impact Assessment Procedure

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1.0 PURPOSE

The purpose of an Environmental Impact Assessment (EIA) is to identify, foresee and evaluate the environmental and social impacts of the project, proposing a means of attenuating the adverse effects while maximizing the environmental and social benefits. This procedure applies to works performed under all Government construction projects executed throughout the Kingdom of Saudi Arabia (KSA).

2.0 SCOPE

Beyond an Environmental Scoping Review (ESR), all applicable projects should complete an EIA with the appropriate level of detail to the corresponding project category - as defined in Appendix 2 of PME General Environmental Regulation and Rules for Implementation. The EIA should cover impacts and risks mitigation from the design phase through operations. The EIA should meet all KSA, national, regional (or Amana), and local (city) level requirements as well as any financier's internationally specified requirements.

3.0 DEFINITIONS

Definitions	Description
Consultant	Qualified Environmental Impact Assessment (EIA) Consultant
EIA	Environmental Impact Assessment
Entity Project Management Organization (EPMO)	An Entity Project Management Organization, this is an integrated team that comprises the Entity and its PMC responsible for managing all the Entity's projects.
ESMP	Environmental and Social Management Plan
ESR	Environmental Scoping Review
IEE	Initial Environmental Evaluation.
IFC	International Finance Corporation
KSA	Kingdom of Saudi Arabia
PME	Presidency of Meteorology and Environment - *now operating under the General Authority of Meteorology and Environmental Protection.*
RAP	Resettlement Action Plan

4.0 REFERENCES

1. EPM-KU0-GL-000001 - Sustainability Guideline
2. EPM-S00-PR-000002 - Project Concept Master Plan and Development Framework Procedure
3. EPM-S00-TP-000003 - Project IBD Workshop Briefing Agenda Template
4. EPM-S00-TP-000004 - Project Multi-Disciplinary Concept Options Assessment Template
5. EPM-S00-PR-000004 - Project Permitting Plan Procedure
6. EPM-S00-TP-000005 - Project Permitting Approval Register Template
7. EPM-S00-PR-000001 - Project Stakeholder Engagement Plan Procedure
8. Presidency of Meteorology and Environment (2001). *PME General Environmental Regulation and Rules for Implementation*. Retrieved from www.pme.gov.sa
9. International Finance Corporation (2002). *Handbook for Preparing a Resettlement Action Plan*. Retrieved from www.ifc.org
10. The World Bank (2004). *Involuntary Resettlement Sourcebook: Planning and Implementation in Development Projects*. Retrieved from http://documents.worldbank.org

5.0 RESPONSIBILITIES

The EIA should be undertaken by a qualified environmental consultant. This would ideally be the same consultant responsible for undertaking the earlier Initial Environmental Evaluation (IEE) and Environmental Scoping Review (ESR). The consultant should coordinate with the broader project team, other appointed specialist sub consultants, Entity Project Management Organization (EPMO) and key stakeholders throughout the Environmental Impact Assessment (EIA) process.

6.0 PROCESS

6.1 Introduction

The current process for completing an EIA report within the Kingdom of Saudi Arabia (KSA), is found in Appendix 2 of the Presidency of Meteorology and Environment (PME) General Environmental Regulation and Rules for Implementation.

The EIA report should be submitted for approval in Stage 2, once the ESR, which confirms the scope and extent of EIA, has been completed. Approval of the EIA is to be received prior Expro Stage 3 Gate Review and prior to award of the A/E Design Contract.

6.2 Objectives

The EIA report should be developed to meet the following additional objectives:

- Provide a source of information for interested and effected stakeholders so they may gain an understanding of the project, potential alternatives, the environment that it would affect, the impacts that may occur and the measures and management plans that are to be implemented to minimize negative impacts;
- Conduct a thoroughly integrated analysis where risks, impacts and related mitigation recommendations for environmental, socioeconomic, and cultural aspects are coordinated;
- Incorporate stakeholder input as the studies are developed and executed;
- Provide a framework to evaluate environmental aspects of the project in conjunction with technical, social, economic and other factors, and
- Incorporate stakeholder input as the studies are developed and executed.

Please Note: Stakeholder engagement should be undertaken as part of the EIA process. Further Guidance is provided in the Expro Projects White Book, Volume 15, Chapter 1: Sustainability Guideline EPM-KU0-GL-000001.

6.3 PME Project Category Requirements

The report structure corresponding to the appropriate project category identified in the ESR process, should will be used. Please refer to Appendix 2.2 of the PME General Environmental Regulation and Rules for Implementation for specific report requirements. Below are sample report structures for each of the three project categories.

6.3.1 First Category: Projects with Limited Environmental Impacts

At minimum, complete an initial environmental assessment form for First Category projects and prepare a simple preliminary report on the project. This report should include the following:

- Type of project;
- Identification if new or existing facility;
- Project location;
- Population within 250 meters of proposed project
- Footprint of the project;
- Source of Energy and Fuel information (type and quantity);

- Construction activities;
- Timeline of project, and
- Permits and licenses.

6.3.2 Second Category: Projects with Significant Environmental Impacts

At minimum, the environmental consultant should complete the initial environmental assessment form for second category projects, as well as prepare a summarized technical environmental report on the project. More information on best practice report content can be found under Section 6.4 of this procedure. This report should include (but not be limited to) the following:

- Type of project;
- Identification if new or existing facility;
- Project location;
- Timeline of project;
- Population within 250 meters of proposed project;
- Footprint of the project;
- Source of Energy and Fuel information (type and quantity);
- Construction activities including methods and equipment;
- Technologies used;
- Key characteristics of the project;
- Objectives of the project;
- Justification for the project;
- Major project components;
- Proposed environmental inputs and outputs of the project;
- Description of ambient environment;
- Analysis of environmental impacts;
- Control and Mitigation procedures/technologies, and
- Required permits, approval and licenses.

6.3.3 Third Category: Projects with Serious Environmental Impacts

At minimum, the environmental consultant should conduct an environmental assessment study for the project in accordance with the guidelines for the development of an environmental impact assessment for industrial and development projects (Appendix 2.4) in coordination with the PME. The Entity responsible for the project is obliged to liaise with the PME for the preparation and coordination of the study. More information on best practice report content can be found under Section 6.4 of this procedure. The report should, as minimum, include the following:

- Presentation of The Project;
- Description of The Project and Its Objectives:
    - Goals;
    - Need for the project;
    - Components of the project (onsite facilities attached to the project such as water treatment plants, water desalination plants, electrical power plants housing etc.);
    - Project construction phases;
    - The workforce required for implementation of the project (minimum and maximum);
    - The workforce required for operation of the project (minimum and maximum), and
    - Alternatives and options.

- Status of Surrounding Environment including the following:
    - Air quality;
    - Soil and topography;
    - Oceanography;
    - Surface and ground water;
    - Land environment (fauna/flora);
    - Marine environment (fauna/flora);
    - Land use of selected site and its surroundings, and
    - Land ownership (original owner).
- The Environmental Assessment including the following:
    - Identification of the general potential impacts of the project and suggested alternatives.
    - Identification and analysis of key effects of the project on:
        - Air quality;
        - The marine and coastal environment;
        - Surface and underground water;
        - Flora and fauna;
        - Land use and urban development;
        - Residential clusters;
        - General scenic view, and
        - Others.
- Assessment of Significant Impacts:
    - Quantify and rate the significant impacts on natural resources;
    - Estimate the relative damage to the area and the extent of its potential;
    - Estimated lifespan of the facilities, and
    - Studies on the possible mitigation of anticipated impacts.
- Summary of The Significant Impacts After Mitigation Processes:

6.4 EIA Report Best Practices

As a minimum for all Category 3 projects (i.e. projects with serious environmental impacts), the following topics should be reviewed in each full EIA to help ensure a successful project. These guidelines align with the internationally recognized International Finance Corporation's (IFC) Performance Standards. Depending on the potential impacts of a proposed Category, this structure should be followed as appropriate based on the complexity of the project.

6.4.1 Policy, Legal and Administrative Project Framework

A review of pertinent regulations; obligations for implementing, relevant international social and environmental treaties, agreements, and conventions; standards. Ensuring the inclusion of any environmental requirements from outside financiers. Identify relevant international environmental agreements to which the country is a party. Identify the relevant agencies and entities involved in the project

6.4.2 Description of Project Environment

Assess the dimensions of the study area and describe relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences. Evaluate current and proposed development activities within the project area but not directly connected to the project. Data should be relevant to decisions about project location, design, operation, or mitigation measures. The section should indicate the accuracy, reliability, and sources of the data.

Baseline studies would likely be required for the following topics (to be finalized via the scoping report) as applicable per the project category:

- Hydrology, surface water, groundwater quality (physical, biological, chemical parameters);
- Climate (seasonal and regional precipitation along the alignment, temperature, wind, extreme seasonal events);
- Air quality, existing sources of air emissions;
- Noise and Vibration;
- Soil and Sediment Quality;
- Water Quality and existing water pollution discharges and sources;
- Road traffic and transportation;
- Archeological and cultural resources;
- Visual landscape;
- Terrestrial, marine and freshwater ecology and biodiversity (i.e. ecosystems/habitats including sensitive habitats such as wetlands, shallow coastal water habitats, forests, mountain habitats, fish, avian, amphibian and mammals), species of conservation value (threatened, rare, or endangered), and protected areas;
- Wildlife migration and behaviors - including any recent changes;
- Industrial, agricultural and domestic water use (quantity, quality and source) and land use;
- Socioeconomics;
- Urbanization and projects planned or in development that would affect the road placement and characteristics;
- Public health, and
- Indigenous peoples/traditional lifestyles.

6.4.3 Alternatives

Review each proposed alternative and provide a summary of major potential impacts both positive and negative for carrying out the project. These proposed alternatives shall include a “without project” option, and each alternative should be given equal, adequate consideration.

6.4.4 Potential Impacts and Mitigation Measures

Predict and assess the project's likely positive and negative impacts, in quantitative terms to the extent possible. Identify and estimate the extent and quality of available data, key data gaps, and uncertainties associated with predictions, and specify topics that do not require further attention. Impacts and risks during construction and operations should be evaluated.

Impacts should be evaluated based on severity, permanence, likelihood and risk of occurrence - or similar framework. Evaluate whether impacts may vary per ‘receptor/audience’ (vulnerable groups, etc.). The impact areas should consider any applicable regulations. At a minimum, a review of the following issues should be undertaken, in accordance with their relevance and significance for the proposed project during both construction and operations phases.

Identify mitigation measures that avoid, offset the negative impacts or reduce them to acceptable levels, as well as identify any residual negative impacts that cannot be mitigated. Explore opportunities for environmental enhancement. Mitigation measures should address separately the construction and operational phases, and briefly address ‘end of life’ considerations. Present a concise table that avoids repetition and summarizes project activity, impact and mitigation.

6.4.5 Environmental and Social Management Plan (ESMP)

Environmental and Social Management Plan (ESMP) proposes the measures for eliminating, minimizing or mitigating adverse impacts. Indicative time frames, responsibilities and costs for mitigations should be proposed in consultation with the project proponent. The ESMP must satisfy all requirements, in identifying feasible and cost-effective measures that reduce potentially significant adverse impacts to acceptable levels.

The ESMP identifies and summarizes all anticipated significant adverse impacts and describes the mitigation measures - including whether they are continuous or contingent upon circumstances. It should estimate the potential residual impact following the implementation of the mitigation measure and provide linkages to any other specific mitigation plans, such as a Resettlement Action Plan.

The ESMP should include a basic implementation schedule, responsibilities and estimated costs, and will be developed with input from the proponent and sponsors.

6.4.6 Monitoring and Audit Program

The monitoring and audit program during project implementation provides information about key environmental aspects of the project, particularly the environmental impacts of the project and the effectiveness of mitigation measures. Such information enables the respective authorities or other key stakeholders to evaluate the success of mitigation as part of project supervision, and allows corrective action to be taken when needed. Therefore, the Monitoring and Audit Program must identify monitoring objectives and specifies the type of monitoring and audits to be conducted, with linkages to the impacts assessed in the EIA report and the mitigation measures described in the ESMP.

6.4.7 Conclusion and Recommendations

This Section of the EIA will include a summary of the key impacts evaluated, and conclusions of the impact analysis.

6.4.8 Appendices

- List of EIA report authors and contributors;
- References - written materials;
- Records of interviews, consultation meetings, including meeting notes, attendee lists, and records of other consultations (such as surveys) that were used to obtain views of affected people;
- While maps and certain tables of information (particularly interpretations of data) should be contained in the body of the report, the appendices will contain the relevant original data referred to or summarized in the main text, and
- List of any associated reports (e.g. Resettlement Plan or Influx Management Plan).