

SECTION C: IMPACT ASSESSMENT

CHAPTER C1: INTRODUCTION

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1 INTRODUCTION

This section of the ESIA provides an assessment of the expected environmental and social impacts of the Oyu Tolgoi Project. The assessment is provided by environmental and social medium and is presented for each stage of the Project cycle from construction through to operations and closure/decommissioning.

Each chapter presents the following information:

- Introduction to the key issues and impacts arising;
- Description of the spatial, technical and temporal scope of the assessment;
- Description of impacts and mitigation measures across the lifetime of the Project;
- Assessment of residual impacts, occurring after the application of mitigation measures; and
- Presentation of a summary of the assessment in tabular form.

1.1 IMPACT CATEGORISATION AND SIGNIFICANCE

To provide a consistent approach to impact assessment, the following criteria have been used to define the significance of impacts.

- **Duration:** Short, Medium and Long Term;
- **Extent:** Highly Localised, Localised, Restricted and Widespread; and
- **Likelihood:** Highly Unlikely, Unlikely, Likely, Certain.

Impacts have been classed as either Positive or Adverse, and Adverse Impacts have been classified into one of the following five categories:

- **Positive:** Advantageous or positive impact to a resource or receptor;
- **Negligible (Adverse):** Impact that is typically short term and/or highly localised and/or highly unlikely;
- **Minor (Adverse):** Impact that is typically short to medium term and/or localised and/or unlikely;
- **Moderate (Adverse):** Impact that is typically medium term and/or restricted and/or likely; and
- **Major (Adverse):** Impact that is long term and/or widespread and/or likely to certain. In addition, impacts that are materially in breach of Project standards are adverse and major.

Impact assessment rankings are inherently subjective and are based on the broad experience of the ESIA team in performing such assessments for a wide range of industrial developments.

A series of tables are presented at the end of each chapter to summarise the impacts according to standardised assessment criteria. The approach has been to quantify impacts wherever possible and to highlight those adverse impacts which are assessed to be moderate or major.

1.2 DESIGN OF MITIGATION MEASURES AND MONITORING

Mitigation measures that are generally consistent with Good International Industry Practice¹ have been built into the Project design and will be implemented throughout construction, operations and closure. For each area of impact, mitigation measures have been prepared describing the steps and actions to be taken. These measures are specified for each project phase through construction to operation and closure. In addition to mitigation and management measures, means to manage the residual impacts through the life of Project are set out in the appropriate Management Plans contained in *Section D* of the ESIA. The following hierarchy of mitigation measures has been followed:

- “Designing-out” impacts by adopting an initial design that avoids impacts;

¹ Defined as the exercise of professional skill, diligence, prudence and foresight that would reasonably be expected from skilled and experienced professionals engaged in the same type of undertaking under the same or similar circumstances globally (IFC PS2)

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- Assessing alternatives and, where feasible, adopting those with less or lower impacts;
 - Modifying the initial design to reduce remaining impacts;
 - Applying mitigation measures to manage remaining impacts and/or developing offsets to ensure no net loss of biodiversity resources; or
 - Establishing fair compensatory measures to address residual impacts that remain after implementation of the above steps.

1.3 STRUCTURE OF THE IMPACT ASSESSMENT

The impact assessments cover the biophysical and human environment. Inter-linkages by environmental aspects across different media or issues are highlighted in each chapter to enable an assessment to be made of indirect or consequential impacts.

The Section comprises the following chapters:

- C1: Introduction (this chapter);
- C2: Climate and Air Quality;
- C3: Noise and Vibration;
- C4: Topography, Geology and Soils;
- C5: Water Resources;
- C6: Biological Resources and Ecosystem Services;
- C7: Economic Impacts;
- C8: Population and Influx;
- C9: Employment;
- C10: Land Use and Displacement;
- C11: Cultural Heritage;
- C12: Community Health, Safety and Security; and
- C13: Cumulative Impacts.