Istanbul New Airport ESIA

Impact Assessment Methodology

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6 ESIA Methodology

6.1 Introduction

As indicated previously, an EIA was undertaken for the Project in accordance with Turkish legal requirements and the Project was granted an EIA positive decision on 21 May 2013. Following on from the EIA, this ESIA was commissioned to support funding applications to the international financial institutions. ESIA is a formal process in which the effects of certain types of development projects on the biophysical and social environments are identified, assessed and reported upon in order for the effects to be taken into account by authorities and institutions when considering whether to grant development consent or provide financial support.

This chapter sets out the overall approach that was adopted to assess the potential environmental and social impacts associated with the INA Project. The chapter describes the background information regarding the airport development; the standards and requirements that define the ESIA; ESIA scoping; baseline data collection; the assessment criteria and process; the development of mitigation measures; and an assessment of the predicted residual impacts following the implementation of the mitigation measures. The impact assessment methodology that was adopted is based on models commonly employed in impact assessment, and takes into consideration IFC Performance Standards.

6.2 Key ESIA Stages

6.2.1 ESIA Screening

The first stage in the international ESIA process involves 'screening' or categorisation of the Project in line with the expected environmental risk (as required by Equator Principle 1 and IFC screening criteria). Projects are assigned a category of A, B, or C, in descending order of environmental and social sensitivity. The screening stages included the following key steps:

- Identification of Project components and activities;
- Identification of likely physical, ecological and human receptors based on existing knowledge of the environmental and social baseline conditions and professional expertise; and
- Examination of relevant national and international legislative requirements.

The INA Project has been categorised as Category A, which is defined as *"Projects expected to have significant adverse social and/or environmental impacts that are diverse, irreversible, or unprecedented"* (i.e. is subject to a comprehensive ESIA process).

6.2.2 ESIA Scoping

The scoping process was undertaken from September 2013 to March 2014 in accordance with international lender requirements. Scoping is the process of determining the content and extent of the matters that should be covered in the ESIA and associated documentation. The scoping process aims to:

- define the Project Area and Project Area of Influence (AoI);
- identify the types of environmental and social impacts to be assessed and reported in the ESIA; and

- identify those aspects that are of potentially greatest significance.

As part of the scoping process, a gap analysis with the EIA was undertaken to establish what relevant information could be applied to the ESIA and to identify gaps in the data and/or assessment to comply with international standards. A review was undertaken of the following reports and studies that were conducted as part of the EIA:

- Acoustic Report;
- Air Quality Modelling;
- Ecosystem Assessment Report (Ecological Structure, Terrestrial Flora);
- Istanbul 3. Airport Ornithological Pre-Assessment Report;
- Pre-Assessment of Istanbul 3. Airport in terms of Bird Types;
- Land Use; and
- Traffic Assessment.

A Scoping Report was prepared in accordance with the Performance Standards set by the IFC. The Scoping Report provided a preliminary overview of the INA proposals to:

- highlight potential environmental and social issues and impacts relating to the Project; and
- outline the methodologies for assessing and avoiding or mitigating adverse impacts.

Given the nature and size of this airport development it is considered that there are no issues to be scoped out of this ESIA Report. A summary of the preliminary scoping assessment of the potential impacts is set out in **Chapter 1 Introduction**; these have then been discussed in greater detail, where necessary, in the following ESIA chapters:

- Meteorological Conditions and Climate Change;
- Air Quality;
- Noise;
- Geology and Soils;
- Water Resources;
- Forestry;
- Waste Management;
- Ecology;
- Natural Hazards;
- Resource Efficiency;
- Traffic and Transport;
- Landscape and Visual Features; and
- Social and Cultural Assessment (covering Land Use; Land Acquisition; Cultural Heritage and Archaeology; Population and Settlement Patterns; Income and Poverty Levels; and Public Health).

Copies of the gap analysis and Scoping Report are provided in Annex 6.A and 6.B respectively.

6.2.3 Compilation of Environmental and Social Baseline Data

Following the gap analysis undertaken at the scoping process, baseline environmental and social data were collected based on the development of individual subject methodologies. The following field surveys and desk based studies were required to address identified gaps in baseline data, and were carried out during 2011 and 2014:

- Air Quality monitoring and modelling;
- Noise monitoring;
- Soil surveys (soil type and chemistry);
- Freshwater Water Quality surveys;
- Sea Water Quality surveys;
- Terrestrial ecology field surveys (habitat and species based surveys, which also provided further information on forest areas);
- Marine ecology surveys (habitat and species based surveys);
- Freshwater ecology surveys;
- Road traffic surveys;
- Landscape and Visual amenity characterisations; and
- Socio-economic interviews.

The full details of the surveys undertaken (timing, location, methods and results), together with information gathered through desk-based data review process, are presented in the relevant chapters of this ESIA. Methodologies were followed by survey teams working to a defined survey schedule. Flexibility was provided for methodologies to be adapted based on conditions on the ground at the time the survey took place.

6.2.4 Impact Assessment Framework

Activities and Impacts

Following on from the scoping process, Project activities[1] and potential environmental, socio-economic and cultural heritage impacts upon receptors[2] were further defined.

Project activities were identified through a review of **Chapter 3 Proposed Project and Project Development.** Potential impacts were identified based on the details of Project activities and their potential interactions with the surrounding environment (and physical, ecological and/or human receptors). This also required an understanding of the potential sources of impacts and impact pathways, and was supported by:

- An understanding of baseline conditions and potential receptors (**Chapters 7.1 – 7.14**);
- The spatial and temporal extent of the Project AoI (**Chapter 1 Introduction**);
- Information from stakeholders, including authorities, experts, and the public (**Chapter 5 Stakeholder Engagement**); and
- Professional knowledge and experience of comparable projects or developments.

[1] A physical action or presence of infrastructure associated with the operation of Project plant, equipment or vehicles, or the actions of Project employees.

[2] Someone or something that could be influenced by the Project, including human health, water resources, air quality, ecological habitats or species, cultural heritage assets, and the wider environment.

The identification and understanding of Project activities and impacts was an iterative process conducted throughout the ESIA as more Project and environmental and social baseline information became available.

Impact Categorisation and Significance

Within this ESIA, impact categorisation and significance have been evaluated with reference to definitive standards, accepted/published criteria and legislation, where available. Where it has not been possible to quantify impacts and effects, qualitative assessments have been carried out, based on expert knowledge, GIIP and professional judgement. Where uncertainty exists, to the extent possible, it has been noted in the relevant assessment chapters.

A standard approach has been adopted across the entire ESIA wherever possible to consistently define impact significance. This approach is applied to the assessment of impacts in all phases of the Project (i.e. construction and operation). The standard approach has been structured as transparently as possible using the severity[3] criteria presented in Table 6.1.

Table 6.1 Generic (Qualitative) Severity Criteria

None/Negligible	No discernible impact – Effects are non-existent or the impact of a particular activity is deemed to be "negligible" or" imperceptible" and is essentially indistinguishable from natural background variations.
Low	Slight effects, well within Project Standards[4] **Duration:** short term **Extent:** localised to immediate area **Reversibility:** reversible **Sensitivity of the Receptor:** low sensitivity/value[5]
Moderate	Noticeable effect but still within Project Standards **Duration[6]:** short term (moderate receptor sensitivity/value) or regional (low receptor sensitivity/value) **Extent[4]:** local (moderate receptor sensitivity/value) or regional (low receptor sensitivity/value) **Reversibility:** reversible **Sensitivity of the Receptor:** Moderate/low sensitivity/value
High	Considerable effect and/or repeated breach of regulatory/project limits based on estimated impacts above the standard/limit values. **Duration**: medium to long term (moderate to low value receptors), short term (high value receptors, protected habitats/species) or long term.

[3] Severity is dependent upon the magnitude of the impact, for example, in terms of the duration (long, medium, short term), the extent (site, local, regional, national) and reversibility (reversible, irreversible) as well as on the sensitivity of the receptor (as a resource and/or to the change or impact.

[4] The Project Standards are as defined in **Chapter 2 Policy, Legislative and Regulatory Framework**.

[5] For example, low sensitivity might refer to an abundant common species where the project would not result in any local or regional threat to population numbers. The sensitivities of specific receptors are further described in the baseline assessment chapters of this ESIA. Where practicable assessment of sensitivity will be aligned with national and international requirements.

[6] The precise definition of the "duration" and extent" of impacts is dependent on the nature of the impact and the sensitivity of the receptor.

	Extent: local (high receptor sensitivity/value receptors), or irreversible (low value receptors or localised moderate/high value receptors/habitats) or regional, national or international effect. **Reversibility:** reversible (moderate/high value receptors), or irreversible (low value receptors or localised moderate/high value receptors/habitats). Limited reversibility/irreversible **Sensitivity of the Receptor:** Moderate/High sensitivity/value or high sensitivity/value.

Where an impact is not certain to occur (e.g. due to the inherent stochastic nature of the potential impacts from routine/planned activities or where impacts are associated with unplanned/emergency events), the significance of the impact ***risk*** is a function of the ***likelihood*** that it occurs and the ***severity*** of the impact should it occur. Table 6.2 provides a description of the likelihood categories applied in this ESIA.

Table 6.2 Likelihood Criteria

Probable	Events that are known to occur within the specific industry and likely to occur on multiple occasions during the 25 year BOT lifetime of the Project. Probability of occurrence – more than 50%.
Possible	Known to occur periodically within this specific industry and reasonably foreseeable to occur once during the BOT lifetime of the Project. Probability of an occurrence – less than 50%.
Unlikely	Known to occur rarely in specific industry or periodically within the wider industry. Realistically feasible but unlikely to occur during the BOT lifetime of the Project. Probability of occurrence – less than 10%.
Improbable	Rarely heard of within wider industry and extremely unlikely to occur during the BOT lifetime of the Project. Probability of occurrence – less than 1%.

The significance of the overall impact was then determined using the matrix in Table 6.3 below.

Table 6.3 Significance Matrix

Likelihood of Impact	**Severity of Impact**			
	Negligible	**Low**	**Moderate**	**High**
Probable	Negligible	Low	Moderate	High
Possible	Negligible	Negligible	Low	Moderate
Unlikely	Negligible	Negligible	Negligible	Low
Improbable	Negligible	Negligible	Negligible	Negligible

While it is important to identify the initial significant impacts associated with the Project without mitigation measures in place (but with design controls in place, described further in Section 6.4.5), these impacts are not considered representative of the Project's actual extent of impact. Instead, the key focus of the impact assessment has been to define the significance of residual impacts and effects following the application and/or consideration of mitigation measures. A residual impact is one which continues to be present following the application of avoidance and/or mitigation measures. For completeness, summary tables in each impact assessment chapter also provide an indication of the potential significance of impacts and effects in the absence of mitigation to assist in demonstrating the anticipated effectiveness of proposed mitigation measures.

Residual impacts also serve as the focus of management and monitoring activities to verify that actual impacts are the same as those predicted in this ESIA.

Table 6.4 sets out the terminology used in rating the significance of residual impacts and effects.

Table 6.4 Residual Impacts and Effects Terminology

Type of Residual Impacts/Effects	Descriptor
Adverse	Negative effect to an environmental resource or receptor.
Neutral	No effect to an environmental resource or receptor.
Beneficial	Advantageous or positive effect to an environmental resource or receptor.

Methods of prediction that are applied in the ESIA are either quantitative or qualitative or, in certain instances, both. Quantitative methods predict measurable changes as a result of the INA Project and rely on accurately measuring baseline conditions to make accurate predictions with the Project completed and operational.

Qualitative assessment techniques rely on expert judgement and experience and an understanding of GIIP, and are exercised within a structured framework to ensure the consistency of the conclusions drawn. As such, clear distinction is made between matter of fact, judgement and opinions, with all sources identified. Assumptions, degrees of confidence and areas of uncertainty are clearly stated.

Table 6.5 below gives an example of the assessment process in practice.

Table 6.5 Summary of Residual Impacts

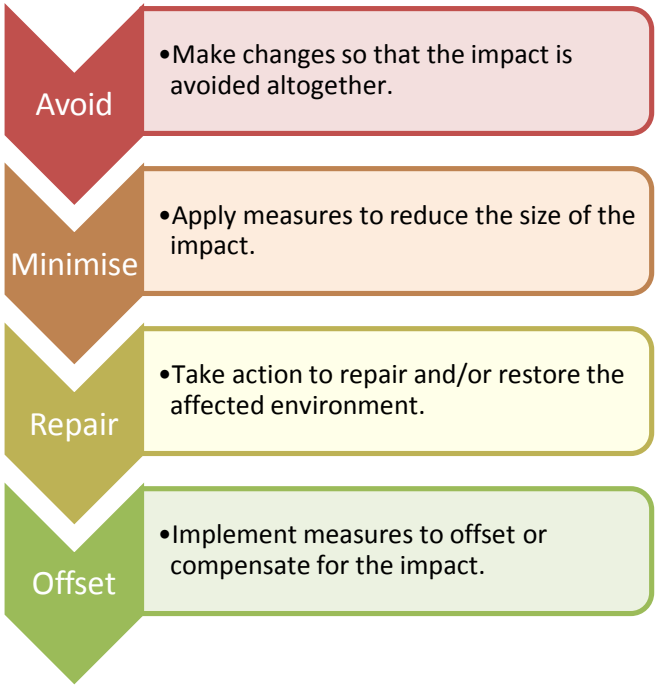
Topic	Receptor/ Beneficiary	Phase	Impact Categorisation	Potential Significance Prior to Mitigation	Design, Enhancement or Mitigation Measures	Management Plan	Residual Significance
Deterioration of ambient air quality resulting from mobile and stationary equipment on Site	Existing construction worker accommodation area, existing settlements on the Project Area boundary	Construction	**Type:** Negative **Duration:** Short Term **Extent:** Local **Reversibility:** Reversible **Sensitivity:** Low sensitivity	**Likelihood:** Probable **Severity:** Low **Significance:** Low	• Adequate maintenance of vehicle and equipment. • Use and maintain vehicles and equipment in accordance with manufacturer guidelines. Replace vehicles/equipment when condition is seen to be deteriorating excessively. • Speed limitation of 80 km/h in all areas and as low as 10 km/h in sensitive receptor locations (e.g. camps). • Provision of compacted granular wearing course on all graded roads. • Provision of wet dust suppression and/or dust palliatives in sensitive receptor locations. • Restriction on vehicular usage in off-road areas and informal tracks, including tracking of vehicles using GPS).	Atmospheric Emissions Construction Management Plan	**Negligible (Adverse)**

6.2.5 Design of Mitigation Measures and Monitoring

The following hierarchy of mitigation measures (as summarised in Figure 6.1) has been followed for the Project:

- Designing-out impacts by adopting a design that avoids impacts;
- 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; or
- Establishing fair compensatory measures to address residual impacts that remain after implementation of the above steps.

Figure 6.1 The Mitigation Hierarchy



Efforts were made to firstly avoid or prevent, then minimise or reduce adverse impacts, achieved through the application of design controls (including physical design features and management measures). These design controls are generally consistent with GIIP and industry accepted controls associated with airport development, such as ICAO standards for environment and health and safety management, have been built into the INA Project design and will be implemented throughout construction and operations.

Where the impact assessment identified impacts as potentially arising, further mitigation measures have been developed and describe the steps or actions to be taken. These measures are specified for each Project phase through earthworks, construction to operation. Once feasible mitigation measures were identified and agreed, potential impacts were reassessed, assuming the mitigation measures were effectively implemented as planned.

Where a residual impact was considered of Moderate or High significance, an iterative process has been undertaken to further investigate opportunities for mitigation, according to the

hierarchy above. Where the significance cannot be further reduced, an explanation is provided of why further reduction is not practicable.

In addition to mitigation and management measures, means to manage the residual impacts through the life of INA Project are set out in the framework for the ESMP.

6.2.6 Environmental and Social Management System

A framework ESMP presented in **Chapter 8** has been prepared which explains how environmental and social commitments have been captured from the ESIA to ensure that the Project is constructed and operated in accordance with relevant regulatory and legislative requirements, international guidance and GIIP. The framework ESMP will also form the basis for subsequent, detailed ESMPs which will be developed by IGA and the EPC Contractor for both the construction and operational phase of the Project. These ESMPs will capture all mitigation, management measures and environmental and social commitments made within the EIA and ESIA reports.

Once developed, the detailed operational ESMPs will be part of the 2018 Health, Safety and Environmental Management System (HSE MS), to be developed by IGA and its EPC Contractor to provide an integrated HSE MS for the INA Project. The EPC and Operations and Maintenance (O&M) Contractor(s) will be required to ensure that the requirements set out in this ESIA and the framework ESMP are included in their management plans and IGA will track this process.

6.2.7 Stakeholder Engagement

Stakeholder consultation has been a part of the ESIA process. Stakeholder engagement was and continues to be undertaken throughout the development of the Project to ensure that all interested parties are aware and informed of the Project and have an opportunity to provide input regarding potential Project impacts and mitigation measures. To date, consultations have been undertaken with:

- Local Governmental Organisations;
- Turkish Governmental Organisations;
- Non-governmental Organisations (NGO's) - local, national and international;
- Local Communities/Residents;
- Local Businesses;
- Public Economic Enterprises;
- IGA; and
- Airline Companies (National and International).

A Stakeholder Engagement Plan has been prepared (**Chapter 5 Stakeholder Engagement Plan**) for the Project to identify stakeholders and their interests, describe the consultation and establish a framework for stakeholder engagement activities to be undertaken as the Project progresses beyond the ESIA phase.

The stakeholder consultation process has helped the ESIA to scope potential impacts and concerns identified by the public. Stakeholder consultation has been part of the ESIA process and will continue beyond the ESIA phase during Project implementation to ensure the management of impacts takes stakeholder concerns into account.

6.2.8 Assumptions and Limitations

This ESIA Report has been based on design information available at the time of its preparation. Where necessary assumptions have been made and discussed in the relevant chapters. Consequently the ESIA has been undertaken on Project design information at the master planning stage prior to the Front End Engineering Design (FEED) stage.

Unless otherwise verified, data collated for preparation of the EIA have not been used to support the ESIA due to a number of gaps identified in the data set presented.

During the detailed design, construction and operational phases of the Project, there may be a requirement to amend design elements or processes which would result in a deviation from that presented in **Chapter 3 Proposed Project and Project Description**. The Project will have a management of change process to manage and track any such amendments, and to:

- assess their potential consequences with respect to environmental and social impact; and
- to inform and consult with relevant parties on the nature of the impact and on proposed mitigation measures (where a significant impact is likely to arise as a consequence of the amendment or change), where practical and appropriate.

All design changes will be added to a register of changes, which will summarise the change, the assessment, and the justification for IGA's actions. The management of change process will be incorporated into a Management of Change Procedure.

Monitoring plans will be prepared and will set out ongoing data collection activities to inform continual improvement in environmental and social performance during construction and operation.

6.2.9 Cumulative Impacts

The assessment of cumulative impacts is a long established requirement for any comprehensive ESIA. For the purposes of this Project, the primary reference source that was referred to was the IFC Good Practice Handbook on Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets (Ref. 6.4) together with the Sample Guidelines: Cumulative Environmental Impact Assessment for Hydropower Projects in Turkey (Ref. 6.5).

The IFC defines cumulative impacts as:

"*Cumulative impacts are those that result from the incremental impact of the project when added to other existing, planned and reasonably predictable future projects and developments".*[7]

As such, two types of cumulative impacts are considered:

- **Type 1** – Combined effects of different types of impact, for example noise and dust and visual impacts resulting together from the earthworks construction of the airport. These are also known as "impact interactions"; and
- **Type 2** – Impacts from other planned developments together with the airport project which individually might be insignificant, but when considered together could amount to a significant cumulative impact. These are referred to as "in-combination" impacts.

[7] International Finance Corporation (2013). Guidance Notes: Performance Standards on Social and Environmental Sustainability, 1 January 2012. Para. GN39.

A predominantly qualitative approach was taken in the identification and assessment of cumulative impacts during the construction and operational phases of the Project, taking into account geographical and temporal overlaps with the Project. It is recognised that there is an inherent uncertainty in the range of potential cumulative impacts that may arise, although this assessment seeks to identify the main impacts in a qualitative manner in order to provide for a robust analysis.

The assessment of cumulative impacts considers the environmental and socio-economic cumulative effects of the Project in combination with other existing, planned and reasonably predictable future projects and development activities in the northern Istanbul region. Potential cumulative impacts are assessed in **Chapter 7.14 Cumulative Impacts**.

References

Ref. 6.1	International Finance Corporation, IFC Performance Standards on Environmental and Social Sustainability. 2012. http://www.ifc.org/wps/wcm/connect/c8f524004a73daeca09afdf998895a12/IFC_Performance_Standards.pdf?MOD=AJPERES
Ref. 6.2	The Equator Principles III. 2013. http://www.equator-principles.com/resources/equator_principles_III.pdf
Ref. 6.3	Organisation for Economic Co-operation and Development, Revised Council Recommendation on Common Approaches for officially supported export credits and environmental and social due diligence. June 2012. http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=TAD/ECG%282012%295&doclanguage=en
Ref. 6.4	International Finance Corporation, Good Practice Handbook on Cumulative Impact Assessment and Management: Guidance for the private Sector in Emerging Markets, August 2013
Ref. 6.5	World Bank, Sample Guidelines: Cumulative Environmental Impact Assessment for Hydropower Projects in Turkey, 2012

Annex 6.A: ESIA Scoping Report



Istanbul New Airport

ESIA Scoping Report

FINAL

Prepared for:
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	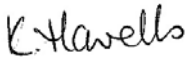
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Abbreviations

AOI	Activity of Interest
APM	Air Passenger Movement
ATC	Air Traffic Control
DHMI	Turkish General Directorate of Civil Aviation
DSI	General Directorate of State Hydraulic Works
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EHS	Environment, Health and Safety
ES	Environmental Statement
ESIA	Environmental and Social Impact Assessment
EU	European Union
GLVIA	Guidelines for Landscape and Visual Impact Assessment
IATA	International Air Transport Association
ICAO	International Civil Aviation Organization
IFC	International Finance Corporation
ISO14001	Environmental Management System Standard
mppa	Million passengers per annum
MoEU	Turkish Ministry of Environment and Urbanisation
MoCT	Ministry of Culture and Tourism
OECD	Organisation for Economic Co-ordination and Development
OHSAS18001	Occupational Health and Safety Assessment Specification 18001
REC	Recognised Environmental Conditions

1 Introduction

Due to the increasing congestion at the Istanbul airports, DHMİ conceptualized the Istanbul New Airport (INA) project in 2012 and in January 2013 issued a tender to appoint a concessionaire for 25 years to build, operate & transfer a new green field airport.

The tender was conducted on an open auction basis on 3 May 2013. İGA Havalimanları İşletmesi A.Ş. (IGA), a Consortium formed by five renowned Turkish companies – CENGİZ, MAPA, LİMAK, KOLİN and KALYON (with 20% stake each), won the tender for 25 years of operating the new airport from completion of the first phase. The project is split into four phases and it is expected that phase four will facilitate a 150 million passenger per annum (mppa) throughput.

1.1 Background

The proposed airport site is located 35km north-west of the existing Ataturk airport and 40km north-west from the centre of the city of Istanbul. The topography of the area is uneven with a terrain elevation difference of several tens of meters from one portion of the site to another (typically between north and south). The site covers an area of approximately 7,650 hectares that borders the Black Sea coastline and falls within the municipalities of Eyup and Arnavutkoy.

In Turkey the project developer is responsible for preparing an Environmental Impact Assessment (EIA) Report along with preparing other permits required to realize the Project. However, the facilities subject to preparation of an EIA Report depend on the type, its capacity, or the location of the activity. The activities that are subject to the provisions of the Regulation on Environmental Impact Assessment are listed in Annex I and Annex II of the Regulation. For Annex I activities a full EIA report is required and those projects go through the full EIA process. For Annex II activities, a Project Description File is prepared in accordance with the format given in the Regulation and the relevant process has to be conducted. As a result of the submission of the Project Description File, where an “EIA Necessary” decision is given, a full EIA is prepared.

The airport development has been subject to the Turkish Environmental Impact Assessment (EIA) process and the EIA report was prepared by AK-TEL Muhendislik on behalf of the Ministry of Transport, Maritime Affairs and Communications, General Infrastructure Directorate and finalized in May 2013. The EIA has received a positive decision from the Turkish Ministry of Environment and Urbanisation (MoEU). The EIA identifies that some 5221 hectares of the land area will be developed as the new airport, including facilities. It reports that only 20% of the area identified for the new airport is privately owned. The EIA indicates that 1,180 hectares is currently being used for mining and quarrying. The EIA report lists 16 companies as licensed mines among which 6 mines are currently operational. An area of 298 hectares (236 hectares of pasture land, 60 hectares of dry farming, 2 hectares of scrub) are being used for agricultural and stockbreeding purposes. The remaining 6,172 hectares are identified in the EIA as forestry, including 660 hectares of different size ponds (70 of them with different sizes ranging from 0.17 to 95.3 hectares) mostly resulting from previous quarry excavation (open pit mining) areas which were then filled by precipitation.

A condition of the concession agreement includes a commitment from the Turkish General Directorate of Civil Aviation (DHMI) that the existing Ataturk Airport on the European side of

Istanbul will be closed to commercial passenger traffic at the time of opening of the new airport (planned for 2018).

The Project Area is located 2.5km to the east from Terkos Lake which is one of the major water resources supplying the city of Istanbul.

1.2 Works Description in the Scope of the Project

The project is the design, build and operation of an international airport located on the Black Sea coast 40km north-west of the city of Istanbul and to the north-west of the existing international airport, Ataturk, located on the European side of Turkey. The Turkish Government has decided that there is a requirement to expand the airport capacity of the region. The airport will include six runways, passenger terminals and satellites (international and domestic); Air Traffic Control (ATC) Towers; Air Passenger Movement (APM) Station; a cargo terminal; maintenance; cargo apron; hangars; and ancillary buildings; general aviation; a VIP terminal; a fuel farm; fuel delivery jetty; fire services; a metro link; airport service roads and airport connector roads. The airport development is planned to be delivered in four phases. The airport will be designed to a full capacity of 150mppa once all four phases of the development have been completed. Detailed phasing of the development is discussed in section 3.3 of this scoping report. In the scope of works for the project, include:

Pre-construction

Land expropriation is required to allow the development to proceed, approximately 20% of the Project Area is in private ownership. A large proportion of the Project Area is covered with forest which needs to be removed to enable commencement of earthworks for Phase 1 construction. There are approximately 70 ponds in the Project Area which require dewatering followed by filling to accommodate construction of runway platforms, airport terminals and support buildings and operations.

Currently, the Project Area has two drinking water pipelines (one is disused) crossing it, along with a power transmission line. These require to be relocated before commencement of earthworks. The Ihsaniye to Tayakadin Motorway runs from east to west within the southern portion of the Project Area. This will be replaced by the construction of the third Marmara Highway connecting the 3rd Bosphorus crossing with Europe to the north of Turkey.

Mobilisation

A main construction camp will be built, this will include worker accommodations (living and eating quarters), offices, car parks, effluent treatment facilities, waste collection areas, medical centre, and visitor accommodations. All will be provided with heating, potable water and electricity. Batching plants, asphalt plants, sub base mechanic plants will be installed to support construction activities within the construction site. Aggregate will be obtained from quarries and transported to site (the location and transport method has not been confirmed at the time of writing this report). An equipment and truck park will be established along with a refuelling station for on-site equipment. Earthmoving and immovable equipment will be refuelled by mobile tankers.

Construction

Earthwork design - the Project Area is currently consists of open cast mining and quarrying activities and forestry lands. The Project Area will be completely redeveloped including earthworks to provide a platform for the airport up to 92 metres above sea level. This will require water bodies to be filled and land to be levelled. The master plan estimates that the

following levels of cut and fill will be required throughout the project to establish the required platform levels:

	Cut (10^6m^3)	Fill (10^6m^3)	Net (10^6m^3)	Total
Phase 1	461	306	155	767
Phase 2	28	34	-6	62
Phase 3	53	18	35	71
Phase 4 (final)	15	24	-9	39
Total	557	382	175	939

Source: Arup 3 February 2014

It is expected that the earthworks for the Phase 1 development will last for an estimated 20 month period.

Super structure works

Passenger facilities includes a 2.5 storey passenger terminal building (Terminal 1) with an associated two level traffic forecourt; the installation of airport system including escalators, apron systems, baggage handling and IT systems and other passenger facilities including construction of tunnels to incorporate the Automated Passenger Mover (APM) and baggage handling systems. Construction of a tunnel and station to accommodate a metro link and construction of a VIP terminal, Government House and associated aprons. Following Phase 1 further development is planned and will include a second terminal that is based on the same principles and Terminal 1 on a smaller scale and satellite passenger area for Terminal 1.

Platform surface preparation and construction will require concrete from on-site batching operations. Aggregate for the development will be sourced from off-site locations that had not been determined at the time of writing this report. Airport access roads will be constructed to link the airport with the local highway network and internal transport movements around the airport.

Auxiliary facilities to be constructed will include a cargo area and airport support facilities including fuel tank farm; fuel delivery jetty; waste water treatment plant(s); combined heat and power (CHP) plant; waste collection facilities; and de-icing facilities.

1.3 Purpose of this Report

This scoping report has been prepared to set objectives, define the scope and establish the strategy to develop an ESIA for the construction and operation of INA.

IGA has been appointed by the Turkish Government to design, build and operate the new INA. The ESIA is needed to evaluate the environmental and socioeconomic impacts of project related activities during the construction and operation of the Istanbul New Airport Project.

The objectives of the scoping report are to identify:

- Key issues and concerns, raised about the project by stakeholders, which need to be considered during the development of the ESIA;
- Environment and social issues that have the potential to be raised during earthworks, construction and operation and may require further studies in the ESIA; and
- Determine the terms of reference for specialist baseline and impact assessment studies.

1.3.1 Impact assessment

The purpose of the ESIA is to determine a baseline (pre-project) environment; assess the significance of potential environment and social impacts; and identify mitigation measures that are designed to avoid, minimise or mitigate the identified significant impacts.

There is a possibility that IGA will seek finance from multinational financial institutions to fund project development. Therefore, an ESIA is required in order for the project to meet International Finance Corporation (IFC) Performance Standards (2012); European Bank for Reconstruction and Development (EBRD) Performance Requirements (2008) and Equator Banks, Equator Principles III.

An EIA has already been undertaken for INA development, this has received a positive decision from the Turkish MoEU.

The ESIA will also identify and estimate the extent and quality of available data, and uncertainties associated with predictions, and specify topics that do not require further attention.

The ESIA will incorporate:

- Initial scoping of the assessment process
- Project description
- Examination of alternatives
- Identification of the Project Area of Influence
- Stakeholder identification and gathering of environmental and social data
- Impact identification, prediction and analysis
- Generation of mitigation and management measures and actions
- Significance of impacts and evaluation of residual impacts
- Assessment of Cumulative impacts

The ESIA is required to be proportionate to the nature and scale of the project's potential impacts and it shall comply with the host country's laws and regulation, including the relevant disclosure of information and public consultation requirements.

The ESIA will be designed to comply with the Turkish legal requirements: Environment, Health and Safety International and Aviation Standards including ISO 14001; OHSAS 18001; International Civil Aviation Organization (ICAO) – safety and environmental requirements; International Air Transport Association (IATA) Standards; and European Safety Agency Standards (ESAS). Additionally, the ESIA will address international lender requirements as set out in Section 2 of this report.

1.3.2 Scoping Report Disclosure and Update

This scoping report will form part of the project documentation and will be available to stakeholders during the project consultation process. Locations for public disclosure of the scoping report have not been finalised, but it is expected that copies will be available via the IGA internet site; at Arnavutkoy and Eyup Municipality buildings and at local libraries and post offices (as appropriate). For environmental and social topics, this process will be incorporated into the Stakeholder Engagement Plan (SEP) prepared as part of the ESIA. Annex C contains an indicative stakeholder list which will be subject to changes as the social assessment progresses.

This scoping report will not be updated; however, comments regarding the scoping report will be received and reviewed accordingly during the course of preparation of the ESIA.

2 Policy, Legal and Administrative Framework

2.1 Legal Framework for Environmental Protection and Conservation in Turkey

Turkish environmental regulations were developed in line with national and international initiatives and standards, and some of them have been revised recently to be harmonized with the EU Directives in the scope of the pre-accession efforts of Turkey.

The MoEU (former Ministry of Environment and Forestry) is the responsible organization for the implementation of policies adopted for protection and conservation of the environment, and for sustainable development and management of natural resources. The Ministry of Environment and Forestry was first established as an Under-secretariat of the Prime Minister's office in 1987 and was promoted to the position of Ministry of Environment in August 1991 by the Establishment Law No. 443. Then, the Ministry of Environment and Forestry was established in 2003 through a merger of the previously separate Ministry of Environment and Ministry of Forestry. Recently, the environment part of the Ministry of Environment and Forestry was separated and merged with the Ministry of Public Works and Settlement to form the Ministry of Environment and Urbanization (MoEU) in 2011.

The MoEU has provincial directorates in each province. The central organization in Ankara is mainly composed of the following directorates and departments:

- General Directorate of Geographic Information Systems (GIS)
- General Directorate of Natural Assets Conservation
- General Directorate of Spatial Planning
- General Directorate of Environmental Management
- General Directorate of Environmental Impact Assessment (EIA), Permitting and Auditing
- General Directorate of Structural Works
- General Directorate of Infrastructure and Urban Transformation Services
- General Directorate of Professional Services
- Department of Strategy Development
- Department of EU Investments
- Department of Foreign Relations

The Turkish Environmental Law No. 2872, Official Gazette: August 11 1983. No. 18132, which came into force in 1983, handles environmental issues on a very broad scale. According to the basic principles that govern the application of the Environmental Law, and as stated in the Constitution, citizens as well as the state bear responsibility for the protection of the environment. Complementary to the Environmental Law and its regulations, other laws also govern the protection and conservation of the environment, the prevention and control of pollution, the implementation of measures for the prevention of pollution, health, safety and labour issues. Examples of these laws are:

- Occupational Health and Safety Law No: 6331, Official Gazette date: June 30, 2012, No: 28339.

- Forest Law. Law No: 6831, Official Gazette date: 8 September 1956, No: 9402
- Labour Law No: 4857, Official Gazette date: June 10, 2003, No: 25134.
- Social Insurances and General Health Insurance Law No: 5510, Official Gazette date: June 16, 2006, No: 26200.
- Public Health Law No: 1593, Official Gazette date: May 6, 1930, No: 1489.

2.2 Institutional Framework

In the Environment Law, the general scope of the Environmental Impact Assessment (EIA) procedure is set out in Article 10. Within this legal framework the EIA Regulation was put into force by its publication in the Official Gazette No. 21489 on February 7, 1993. To date, the regulation has been revised several times. Consequently, the last revision of the Regulation on EIA was published in the Official Gazette No. 28784 on October 03, 2013.

When a project is planned, the project developer is responsible for preparing an Environmental Impact Assessment (EIA) Report along with other permits required to realize the Project. Facilities subject to preparation of an EIA Report depend on the type of the facility, its capacity, or the location of the activity. The activities that are subject to the provisions of the Regulation on Environmental Impact Assessment are listed in Annex I and Annex II of the Regulation. For Annex I activities a full EIA report is required and those projects go through the full EIA process. For Annex II activities, a Project Description File is prepared in accordance with the format given in the Regulation and the relevant process has to be conducted. As a result of the submission of the Project Description File, where an “EIA Necessary” decision is given, a full EIA is prepared.

The full EIA process starts with submitting a brief report (EIA Application File), summarizing the characteristics of the project and the impact area, and the potential environmental impacts and mitigation measures, prepared according to the format provided in Annex III of the EIA Regulation to the MoEU. Then the MoEU, General Directorate of EIA, Permit and Inspection (former General Directorate of EIA and Planning) forms a committee from related governmental and non-governmental agencies, which also includes the project owner and the consultant that would prepare the EIA report. With the formation of this committee the scoping phase starts.

The committee aims to define the scope of the EIA report to be prepared for the project. The EIA scope is defined based on the findings of the committee and the comments and suggestions received from a public participation meeting held at the project site. The purpose of the meeting is to give information regarding the project and take the opinion of the public and answer their questions regarding the project. In addition, the Ministry shall announce that the EIA process regarding the project has been initiated and information regarding the EIA process may be obtained also via the internet. The scoping phase is completed with the agreed scope of the EIA defined by the committee. Based on the agreed scope, the EIA studies are conducted and the report is prepared. After the submission of the EIA Report to the General Directorate of EIA, Permit and Inspection, it is checked with regard to the contents to decide whether the report is suitable for starting the review process. If the content of the report is found to be appropriate, the review period starts and ends with either a positive or negative decision.

The MoEU and the governorships are responsible for informing the public that the review period of the EIA Report has started. The public will be able to access the EIA Report from the web site of the MoEU or the relevant Provincial Directorate and comment on the Report. Comments are reviewed in the Review Commission meeting and the results are reflected in the EIA Report.

2.3 Turkish Legal and Regulatory Framework

Activities to be carried out within the scope of the project should be conducted in accordance with the provisions of the related Turkish legislation, the most important of which are listed below. Within this context, any license and/or permit required for the upcoming stages of the project required to be acquired according to the above-mentioned regulations should be obtained. The Turkish legal framework for the protection of environment, cultural heritage and wildlife and nature and the institutional framework are described in the following sections.

2.3.1 Environmental legislation

The project is required to comply with various Turkish environmental regulations in line with the activities being or planned to be conducted within the scope of the proposed Project, as well as in implementing related management plans. A comprehensive (though non exhaustive) list of relevant regulations is given below:

- Environmental Impact Assessment Regulation, Official Gazette date: October 03, 2013, No: 28784.
- Environmental Auditing Regulation, Official Gazette date: November 21, 2008 and No: 27061.
- Regulation Concerning Environmental Land-use Plans, Official Gazette date: November 11, 2008 and No: 27051.
- Regulation on Permits and Licenses that are to be obtained in accordance with the Environmental Law, Official Gazette date: April 29, 2009, No: 27214.
- Hazardous Waste Control Regulation, Official Gazette date: March 14, 2005, No: 25755.
- Regulation on the Control of Excavation Materials, Construction and Demolition Wastes, Official Gazette date: March 18, 2004, No: 25406.
- Solid Wastes Control Regulation, Official Gazette date: March 14, 1991, No: 20814.
- Regulation Concerning the General Principles of Waste Management, Official Gazette date: July 5, 2008, No: 26927.
- Regulation Concerning the Landfill of Wastes, Official Gazette date: March 26, 2010, No: 27533.
- Regulation Concerning the Incineration of Wastes, Official Gazette date: October 6, 2010, No: 27721.
- Regulation on the Control of Waste Tyres, Official Gazette date: November 25, 2006, No: 26357.
- Regulation on the Control of Medical Wastes, Official Gazette date: July 22, 2005, No: 25883.
- Regulation on the Control of Waste Batteries and Accumulators, Official Gazette date: August 31, 2004, No: 25569.

- Regulation on the Control of Waste Oils, Official Gazette date: July 30, 2008, No: 26952.
- Regulation on the Control of Waste Vegetable Oils, Official Gazette date: April 19, 2005, No: 25791.
- Regulation on the Assessment and Management of Environmental Noise, Official Gazette date: June 4, 2010, No: 27601.
- Regulation on the Environmental Noise Emission caused by Equipment used Outdoors, Official Gazette date: December 30, 2006, No: 26392 (4th repeated).
- Regulation on the Control of Exhaust, Emissions and Diesel Quality, Official Gazette date November 30, 2013, No: 28837.
- Regulation on Control of Air Pollution from Industrial Sources, Official Gazette date: July 3, 2009, No: 27277.
- The Regulation on Assessment and Management of Air Quality, Official Gazette date: June 6, 2008, No: 26898 (as amended May 2009).
- Regulation on Control of Air Pollution from Heating, Official Gazette date: January 13, 2005, No: 25699.
- Regulation Concerning the Decrease of Ozone Depleting Substances, Official Gazette date: November 12, 2008, No: 27052.
- Regulation Concerning Follow up of Greenhouse Gas Emissions, Official Gazette date: April 25, 2012, No: 28274.
- Regulation Concerning the Increase of Efficiency in the Usage of Energy and Energy Resources, Official Gazette date: October 27, 2011, No: 28097.
- Regulation for the Energy Performance in Buildings, Official Gazette date: December, 5 2008, No: 27075.
- Water Pollution Control Regulation, Official Gazette date: December 31, 2004, No: 25687.
- Surface Water Quality Management Regulation, Official Gazette date: November 30, 2012, No: 28483.
- Regulation Concerning Quality of Surface Waters Planned or Used as Drinking Water Supply, Official Gazette date: June 29, 2012, No: 28338.
- Regulation on Wildlife Protection and Wildlife Development Areas, Official Gazette, date: November, 8 2004. No: 25657.
- Regulation on the Protection of Wetlands, Official Gazette date: April 04, 2014, No: 28962.
- Regulation on Implementation of Article 17/3 and 18 of Forest Law; Official Gazette date: April 18, 2014. No: 28976.
- Regulation on the Control of Pollution Caused by Dangerous Substances, Official Gazette date: November 26, 2005, No: 26005.
- Regulation on the Control of Polychlorinated Biphenyl and Polychlorinated Terphenyls, Official Gazette date: December 27, 2007, No: 26739.
- Regulation on the Control of Soil Pollution and Polluted Areas by Point Sources, Official Gazette date: June 8, 2010, No: 27605.
- Regulation Concerning Water for Human Consumption, Official Gazette date: February 17, 2005, No: 25730.

- Regulation on Pit Opening Where Sewer System Construction is not Applicable, Official Gazette date: March 19, 1971, No: 13783.
- Regulation Concerning Protection of Ground Waters against Pollution and Deterioration, Official Gazette date: April 7, 2012, No: 28257.
- Regulation for Starting up and Operating a Work Place, Official Gazette date: August 8, 2005, No: 25902.
- Regulation on Occupational Health and Safety, Official Gazette date: December 9, 2003, No: 25311.
- Regulation on Protection of Workers against Risks regarding Noise, Official Gazette date: July 28, 2013, No: 28721.
- Regulations on Methods and Essentials of Work Health and Safety Training for Workers, Official Gazette date: May 15, 2013, No: 28648.
- Manual Load Handling Regulation, Official Gazette date: July 24, 2013, No: 28717.
- Health and Safety Signs Regulation, Official Gazette date: September 11, 2013, No: 28762.
- Regulation Concerning the Use of Personal Protection Equipment at Workplaces, Official Gazette date: July 02, 2013, 2004, No: 28695.
- Regulation on Health and Safety Measures in the Use of Work Equipment, Official Gazette date: April 25, 2013, No: 28628.
- Communiqué on Hazard Classes List related to Occupational Health and Safety, Official Gazette date: December 26, 2012, No: 28509.
- Cabinet Decision (Decision Date: December 4, 1973, Decision No: 7/7583), Ordinance on Occupational Health and Safety, Official Gazette date: January 11, 1974, No: 14765.
- Regulation Concerning Operation Certificate, Official Gazette date: December 04, 2009, No: 27422.
- Regulation on the Protection of Buildings from Fire, Official Gazette date: December 19, 2007, No: 26735.
- Ordinance on Precautions Required in Workplaces Working with Flammable, Explosive, Dangerous, and Harmful Substances, Official Gazette date: December 24, 1973, No: 14752.
- Regulation on Protecting Workers from Hazards of Explosive Environments, Official Gazette date: April 30, 2013, No: 28633.
- First Aid Regulation, Official Gazette date: May 22, 2002, No: 24762.
- Regulation on Protection of Workers against Risks regarding Vibration, Official Gazette date: August 22, 2013, No: 28743.
- Regulation on Control of Large-Scale Industrial Accidents, Official Gazette date: August 18, 2010, No: 27676.
- Regulation Concerning Buildings to be built at Earthquake Zones, Official Gazette date: March 6, 2007, No: 26454.
- Regulation Concerning Buildings to be built at Disaster Zones, Official Gazette date: July 14, 2007, No: 26582.

The project developer should comply with the requirements of current national legislation and codes of practice, and fulfill all other legal requirements. Therefore, during each and

every stage of the planned project and implementation of related management plans, all activities should be carried out within certain standards and limits set by the applicable Turkish laws and regulations.

2.4 Permitting requirements

The main licenses and permits that may be required to be obtained throughout the project cycle, other than “Positive Decision for EIA” are listed as the following, as applicable:

- Public Benefit Decision (for expropriation issues);
- Temporary Activity Certificate;
- Environmental Permit or Environmental Permit and License for both construction and operational activities (including air emissions, noise, wastewater discharge permits, water abstraction (including lake dewatering) and waste recovery facility licensing);
- Permits for batching plants, asphalt plants, subbase mechanic plants, temporary fuel storage, temporary hazardous waste storage, crusher, wastewater discharge.
- Environment Plan or Regulatory Development Plan or Master Plan;
- Permit for Exploration and Use of Ground Water;
- Permit for Utilization of Spring Water, Stream, River, etc.;
- Certificate for Operation of a Workplace;
- Site Selection and Building Construction Permit;
- Health Protection Band;
- Construction License of Temporary Works;
- Certificate for Establishment;
- Building Use Permit;
- Site Establishment Permit;
- Connection Quality Control Certificate and/or Wastewater Channel Connection Document;
- Approval of the Design of the Wastewater Treatment Plant;
- Business Establishment and Operating License;
- Temporary Waste Storage Permit;
- Execution of an Agreement with the Construction Supervision Company;
- Private Security Permission;
- Waste (from Excavation and Construction) Transportation and Acceptance Certificate and Acceptance Certificate and Execution of Transportation of Wastes to the Storage Area;
- Permission for Transport, Temporary Storage and/or Use of Hazardous Materials;
- Permission to Use Long and Heavy Vehicles;
- Notification of the Regional Directorate of Ministry of Labour and Social Security of the Workplace;
- Fire Operation Permit;
- Work Permit for Foreign Personnel;
- Forestry Permit (access and deforestation).

2.5 International Environmental and Social Regulatory Framework:

2.5.1 International Agreements and Conventions

The relevant international agreements and conventions that apply to the Istanbul International Airport development include:

- Paris Convention on the Protection of the World Cultural and Natural Heritage (acceded by Law no. 2658 published in the Official Gazette dated 4 February 1983 and no. 17959).
- Bern Convention on Protection of Europe's Wild Life and Living Environment (acceded by the Decision of the Council of Ministers dated 9 January 1984 and published in the Official Gazette dated 20 February 1984 and no. 18318).
- Convention to Combat Desertification (acceded by the Decision of the Council of Ministers dated 3 May 1990 and published in the Official Gazette dated 24 June 1990 and no. 20558).
- Ramsar Convention on Wetlands of International Importance Especially as Wildfowl Habitat (acceded by the Decision of the Council of Ministers dated 15 March 1994 and published in the Official Gazette dated 17 May 1994 and no. 21937).
- Convention on International Trade in Endangered Species of Wild Flora and Fauna (acceded by Law no. 4041 and published in the Official Gazette dated 20 June 1996 and no. 22672).
- UN (Rio) Convention on Biological Diversity (ratified by Law no. 4177 published in the Official Gazette dated 27 December 1996 and no. 22860).
- European Convention on the Protection of Archaeological Heritage (1999).
- European Union Standards - including EU EIA Directive 85/337/EEC, EU Habitats Directive 92/43/EEC and EU Wild Birds Directive 79/409/EEC.
- EU Directive 89/654/EEC - Directive on the minimum health and safety requirements for the workplace.
- Aarhus Convention - UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, 25th June 1998. Turkey is not a signatory.
- International Labour Organisation (ILO) conventions ratified by Turkey, specifically 29 & 105 Forced and Bonded Labour; 87 Freedom of Association; 98 Right to Collective Bargaining; 100 & 111 Discrimination; 138 Minimum Age; 182 Worst Forms of Child Labour.

2.6 Industry Standards and Best Management Practices

Relevant international standards and guidelines are listed below:

- General good international environmental, health and safety (EH&S) practice, best available techniques (BAT) and best environmental practice.
- European Bank for Reconstruction and Development (EBRD) Environment and Social Policy 2008.
- IFC Performance Standards, 2012.
- IFC Environmental, Health and Safety Guidelines for Airports.

- World Bank Group Guidelines - Pollution Prevention and Abatement Handbook 1998.
- Equator Principles III, 2013.
- European Investment Bank (EIB) Statement of Environmental and Social Principles and Standards (2009).
- OECD Revised Council Recommendation on Common Approaches on Environment and Officially Supported Credits.
- International Standards Organisation ISO14001 and OHSAS18001 management system standards.
- International Civil Aviation Organization (ICAO) – safety and environmental requirements.
- International Air Transport Association (IATA) Standards.
- European Safety Agency Standards (ESAS).
- Euro-control.
- European Civil Aviation Conference
- Joint Aviation Authorities (JAA)
- SHGM Green Airport Rules.

2.6.1 International Financial Corporation (IFC) Environmental, Health and Safety Guidelines

IFC has been preparing comprehensive guidance documents about environmental, health and safety (EH&S). These documents include General Environmental, Health and Safety Guidelines and Sector-specific EH&S Guidelines. These guidelines include administrative and technical requirements and best practices for projects' environmental performance, occupational health and safety, community health and safety, etc. for all phases of the project (construction, operation and decommissioning). The sector-specific guidelines of IFC have been prepared for addressing the specific needs of the main sectors in which IFC works. In these guidelines, EH&S issues are included and discussed with regard to the specific needs of various sectors. These guidelines are to be used together with the General EH&S Principles.

IFC Performance Standards on Social and Environmental Sustainability

The following eight Performance Standards establish the requirements that the project owner is required to meet throughout the life of an investment supported by IFC or other relevant financial institution using these standards:

PS 1 Assessment and Management of Environmental and Social Risks and Impacts

PS 2 Labour and Working Conditions

PS 3 Resource Efficiency and Pollution Prevention

PS 4 Community Health, Safety and Security

PS 5 Land Acquisition and Involuntary Resettlement

PS 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

PS 7 Indigenous Peoples

PS 8 Cultural Heritage.

2.6.2 European Bank for Reconstruction and Development (EBRD)

EBRD financed projects are expected to meet good international practice related to sustainable development. To help clients and /or their projects achieve this, the EBRD has established the following Performance Requirements (PRs) that the clients are expected to meet in a time frame acceptable to the Bank:

PR 1 Environmental and Social Appraisal and Management

PR 2 Labour and Working Conditions

PR 3 Pollution Prevention and Abatement

PR 4 Community Health, Safety and Security

PR 5 Land Acquisition, Involuntary Resettlement and Economic Displacement

PR 6 Biodiversity Conservation and Sustainable Natural Resource Management

PR 7 Indigenous Peoples

PR 8 Cultural Heritage

PR 9 Financial Intermediaries

PR 10 Information Disclosure and Stakeholder Engagement

2.7 Lender requirements

In accordance with the Lenders Environmental and Social Standards the project will be identified as an “A” category project whereby impacts are likely to be significant and diverse and require a formalized and participatory assessment process to be carried out. As such a comprehensive Environmental and Social Impact Assessment (ESIA) is required to:

- Identify and assess the potential future environmental and social impacts associated with the proposed project.
- Identify potential improvement opportunities.
- Recommend any measures to avoid or where avoidance is not possible, minimise and mitigate adverse impacts.

2.7.1 IGA Requirements

The reference “Lender Environmental and Social Standards” include: the EBRD Environmental & Social Policy and Performance Requirements (2008); EU EHS and Social Standards in particular the EU EIA Directive (2011/92/EC), EU EHS Framework Directive (89/391/EEC); the Equator Principles III (June 2013); the IFC Performance Standards on Social and Environmental Sustainability (January 2012); the IFC Environmental, Health and Safety (EHS) General Guidelines, April 2007; the IFC EHS Guidelines for Airports (2007); the IFC/EBRD Worker’s Accommodation: Processes and Standards; the EIB Statement of Environmental and Social Principles and Standards (2009); and, the OECD Revised Council Recommendation on Common Approaches on Environment and Officially Supported Credits.

At the time of preparing this scoping report the lender group has yet to be finalised but for the purpose of this ESIA assignment the most stringent lender standards will apply to this project.

3 Istanbul New Airport Project

3.1 General

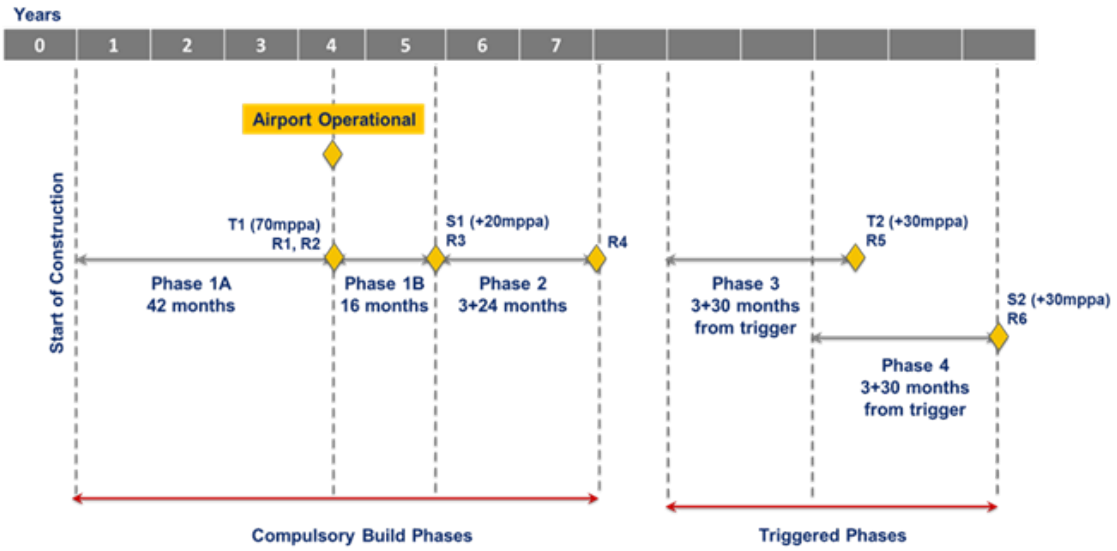
In January 2013, DHMI issued a tender for the design, construction and operation of a new International Airport to service the Istanbul region of Turkey. The Government prepared a reference case master plan for the airport that included a platform with runway thresholds at an average of 122m above sea level; six runways (five north-south and one east-west runway); two passenger terminals and two satellite terminals servicing international and domestic flights; Air Traffic Control Towers; Automatic People Mover (APM) Stations; a General Aviation executive jet and helicopter VIP terminal; a cargo terminal; maintenance; cargo apron; hangars; ancillary buildings; a fuel farm; a fuel jetty and fire services. Following a review by Ove Arup ("Arup") a revised master plan was submitted to DHMI for approval. This master plan introduces alternatives to the original reference design, including a reduction of the platform to a maximum of 92m above sea level, a revised runway layout and an alternative phasing strategy.

The following sections provide a project description for the design, construction and operation of INA covering 4 phases (as set out in the Arup master plan, dated December 2013). Specific facilities required by the Government Terms of Reference are provided in Annex A of this report.

3.2 Project Location

The Project Area is located on the Black Sea coast. The proposed airport site is located 35km north-west of the existing Ataturk airport and 40km north-west from the centre of the city of Istanbul. DHMI has decided that there is a requirement to expand the airport capacity of the region. The topography of the area is uneven with a terrain elevation difference of several tens of meters from one portion of the site to another (typically between north and south). The site covers an area of approximately 7,650 hectares that borders the Black Sea coastline and falls within the municipalities of Eyup and Arnavutkoy. The site is accessed by the Ihsaniye to Tayakadin Highway running in the southern portion of the site. The highway links to the North Marmara Highway construction.

3.3 Project Implementation Calendar



3.3.1 Phase One

Phase 1 is scheduled to span a 42 months from the date of construction site delivery and will provide an airport capacity of 90mppa. The Phase 1 development includes:

- A single terminal facility (Terminal 1) with a processing capacity of 90mppa;
- Three independent North-South runways;
- Supporting taxiway system;
- Air traffic control tower(s);
- Cargo terminal;
- VIP and General Aviation terminals;
- Other airport support facilities, such as, waste water treatment plant; fuel farm; fuel jetty; waste collection facilities; de-icing facilities; Combined Heat and Power (CHP) plant, Automated People Movers (APMs); access road construction and metro access facilities.

3.3.2 Phase Two

Phase 2 will be delivered within 27 months of completion of the Phase 1 programme. The Phase 2 development includes:

- An additional supporting north-south runway; and
- A supporting taxiway.

3.3.3 Phase Three

Phase 3 will be delivered within 33 months following a capacity trigger of 80mppa and will increase airport capacity by a further 30mppa. The Phase 3 development includes:

- A second terminal to the west of Terminal 1;
- An additional north-south runway;
- Supporting taxiway system;

- Expansion of existing cargo and support facilities; and
- Additional support facilities area in the western portion of the Project Area.

3.3.4 Phase Four

Phase 4 will be delivered within 33 months of a capacity trigger of 110mppa and will increase airport capacity by a further 30mppa. The Phase 4 development includes:

- A satellite concourse located to the north of Terminal 1;
- An east-west runway located in the eastern portion of the Project Area;
- Supporting taxiway system; and
- Expansion of existing cargo and support facilities.

3.4 Construction Works Description

The draft construction programme has been developed for Phase 1 activities and incorporates:

Soil Investigation and Earthworks Design.

Mobilisation for the Runway and Main Site Works.

Pre-construction:

- Lake drainage works;
- Relocation of the ISKI pipeline;
- Relocation of power transmission line;
- Forest areas removal.

Construction:

- Substructure works:
  - Earthworks – 1st runway zone;
  - Earthworks – 2nd runway zone;
  - Earthworks – 3rd runway zone.
- Superstructure works including;
- Passenger facilities:
  - Terminal building;
  - Airport systems; and
  - Other passenger facilities;
- Air-side facilities:
  - Apron;
  - First runway and taxiways;
  - Second runway and taxiways;
  - Third runway and taxiways;
  - Airport service roads; and
  - Other air-side facilities.
- Auxiliary facilities.
- Landscaping works.

Testing, commissioning and handover.

3.4.1 Construction Programme

The development programme for Phase 1 works (including construction) runs between December 2013 and December 2017, while IGA does not have land handover official authorisation has been given to conduct initial survey work and the geotechnical soil investigations commenced in December 2013. The programme assumes a land handover date of 1 July 2014 to allow mobilisation to commence in March 2014. Construction programmes for Phase 2, 3 and 4 have not been developed at the time of writing this report.

3.4.2 Airport Construction

Soil Investigation and Earthworks Design

This work will incorporate geotechnical investigative drilling at specific locations across the Project Area to inform the earthworks design for Phase 1. This work will result in an up to date geological map for the site and a full geotechnical report.

Mobilisation

This stage of the programme will require site construction camps to be introduced at defined locations within the Project Area boundary. The main construction camp will be located within the vicinity of the first runway, the second runway location will be the location for the equipment and truck park, and the third runway area will introduce a batching plant and crusher operation.

Pre-construction

Lake Drainage Works

The approach to lake drainage works has not been determined at this point, however, the potential environmental and social impacts associated with each option will need to be evaluated prior to a final decision being taken.

Relocation of the ISKI Pipeline

The new location for the ISKI pipeline will be confirmed and excavation will take place to install the pipework and then backfill the excavation. The new pipeline will be tested and commissioned and once approved the existing ISKI pipeline will be dismantled.

Relocation of the Power Transmission Line

The actions for this element of work have not been defined at the time of writing the report.

Forest Areas

Tree felling will be undertaken by the Ministry of Forestry to allow Phase 1 work to commence. Removal of the wood will be the responsibility of the Ministry of Forestry and the removal of root systems will be integrated into the earthworks programme. The programme for tree removal has not been confirmed at the time of writing the report.

Construction

Substructure Works

The earthworks for the runway zones will include top soil stripping, base preparation, and improvements to the ground and lake floors and excavation and backfilling of the low elevation areas to achieve design platform levels for the construction.

Superstructure Works – Passenger Facilities

The terminal building and airport systems works will include the building of the terminal building structure, including structural works, exterior façade and roof, partitioning and finishing works.

Other passenger facilities will include construction of a tunnel for APM, baggage handling system, a metro station, VIP terminal and passenger apron, VIP apron and Government House and apron.

Superstructure Works – Air-side Facilities

The construction of airside facilities requires granular backfilling, construction of a base and introduction of concrete and/or asphalt.

Auxiliary Facilities

Auxiliary facilities will include construction of facilities for cargo, airport and airline support functions, airport service buildings, an airport city complex including mosque, hotel and hospital, and airport transportation facilities. Other airport support facilities, such as, waste water treatment plant; fuel farm; fuel jetty; waste collection facilities; de-icing facilities; Combined Heat and Power (CHP) plant, APM; access road construction and metro access facilities.

3.4.3 Alternative Options Analysis

Since 2003-2004 the Turkish Government has known that Ataturk Airport would reach capacity and that plans needed to be made to address this situation. For ten years the Government has reviewed alternatives regarding increased capacity for international and domestic air travellers through Istanbul.

The Anatolian and European sides of Istanbul are considered as two separate cities. Therefore, the approach is that if there are two cities then two airports are needed. Sabiha Gokcen International Airport serves the Istanbul Anatolian side and Ataturk Airport serves the Istanbul European side. Due to its location Istanbul is a candidate for becoming one of the largest airport “hubs” in the world. In order to realise this several options have been reviewed. These include:

- Expansion of the existing Ataturk Airport
- Lengthening of the runway servicing military forces in Istanbul
- Expansion of Tekirdag/Corlu Airport and connection to Istanbul via a light rail systems
- Construction of a new airport on the European side of Istanbul

The two main choices which received further study are the options for extending Ataturk and the construction of a new airport on the European side of Istanbul. The site selection process has been wholly the responsibility of the Turkish Government, information regarding consultation activities is limited.

4 Environmental and Social Sensitivity

The proposed airport site is located 35km north west of the existing Ataturk airport and 40 km from the centre of the city of Istanbul. The topography of the area is uneven with a terrain elevation difference of several tens of meters from one portion of the site to another. The site covers an area of approximately 7650 hectares that borders the Black Sea coastline and falls within the municipalities of Eyup and Arnavutkoy. The Project Area includes approximately 189,000 hectares of private property which is subject to land acquisition by the Turkish Government prior to the development taking place. There are four settlements in the vicinity of the Project Area: Tayakadin 350m to the west; Yenikoy 200m to the northwest; Akpinar 250m to the east and Yukari Agacli within the Project Area.

The Project Area supports 6,172 hectares of forest land including 660 hectares of different size ponds (70 in total) mainly resulting from previous quarry excavation areas. There are six operational mines. In addition, an area of 298 hectares is being used for agricultural and stockbreeding purposes (236 hectares of pasture land, 60 hectares of dry farming, and 2 hectares of scrub).

The Project Area will be completely redeveloped including earthworks to provide a platform for the airport of up to 92 metres above sea level. This will require water bodies to be de watered and filled and land areas to be excavated and filled.

The Project Area is not registered as a protection area under Turkish or international law.

The Turkish EIA has been reviewed and the findings are set out in a Gap Analysis table in Annex B. The following section provides detail regarding baseline information obtained from the Turkish EIA and other sources.

4.1 Forestry

The Project Area includes 6,172 hectares of forestry (both natural and artificial), owned and operated by the General Directorate of Forestry and Istanbul Regional Directorate of Forestry. The majority of the trees will be removed to allow the development to proceed. The species in this forest area include maritime pine (*Pinus pinaster*); stone pine (*Pinus pinea*); red pine (*Pinus brutia*); European black pine (*Pinus nigra*); oak (*Quercus*); hornbeam (*Carpinus betulus*); South European flowering ash (*Fraxinus ornus*); linden (*Tilia*); maple (*Acer*) and cedar (*Cedrus*).

4.2 Noise and Air Quality

The EIA has determined noise levels associated with the airport construction activities. However, there is limited information regarding noise levels during airport operations. Modelling of noise during airport operations (aircraft take-off and landing cycles) is necessary to determine the on-going impact of the airport on local communities and facilities.

The air quality modelling conducted in the EIA determined the dispersion of particulate matter (PM10) and exhaust gases associated with construction and operation. The EIA concluded that the estimated levels would be below the limit values given in Turkish Regulations at selected receptor points. At the stage of the EIA preparation the Project was at the reference master plan stage. Thus, new air quality modelling needs to be considered for both operation and construction phases of the project with the development of the new master plan and clarification on the project features and earth movements.

4.3 Resource Use and Energy Consumption

The EIA does not consider energy consumption during earthworks/construction or operation. The master plan confirms that part of the airport energy demands will be met by environmental friendly self-generated systems and options for energy generation have been considered that will reduce both environmental impacts and whole life cost.

4.4 Water Consumption and Lake De-watering

The site includes some 70 ponds (created as a result of the mineral working excavations). Firstly, the ponds within the runaways' construction site will require de-watering prior to earthworks. The EIA indicates that ponds' water will be used for dust suppression on site, but no other options for de-watering were discussed. The volume of water in the lakes is in excess of that expected to be required for dust suppression and vehicle wash, therefore, alternative options for dewatering and discharge are required.

4.5 Climate Change and Carbon Management

The EIA report does not consider issues regarding climate change and carbon management. Thus, during the ESIA studies potential climate change impacts and carbon management issues would be studied in line with the IFC and EBRD standards and guidance. In this regard, any foreseen standard carbon management measure would be obtained from the project documents and IGA.

4.6 Ecology

The EIA conducted a limited survey of existing ecological resources at and in the vicinity of the airport Project Area. Further study (both desk based and on site surveying) is required to determine the baseline for ornithology, vegetation, terrestrial and aquatic and marine ecological resource and the potential impacts of the airport development on these resources.

A section of Terkos Lake is designated as an International Bird Protection Area (IBPA), this protection status extends into the Project Area on the north-west boundary and the IBPA will fall within the project area of influence. With regard to ecological sensitivities in the area, some endemic flora species and species categorized by IUCN were identified based on a literature survey conducted in the scope of the EIA report prepared for the Turkish Government.

The Project Area falls within a bird migration route between Europe and Africa. Birds fly west to east/east to west through the area to cross the Istanbul strait.

Statutory Designated Sites

Protection sites with legal status according to Turkish legislation in the Trace Region, including the Project Area, are shown on the map provided in Figure B1. As the map indicates there are no Turkish legally protected areas in the Project Area and immediate vicinity.

There are some recognised ecologically sensitive areas in the region, which are not designated protected areas under Turkish law. These areas for the Trace region are shown on the map provided in Figure B2. This map indicates that the Project Area has two small portions of these sensitive areas. One of them is to the north west of the Project Area, which is the Terkos Basin. This basin is indicated as an area important for birds, plants and fresh water and is designated as an International Bird Protection Area (IBPA). The other identified

area is to the east of the Project Area (outside the project boundary), which is Agacli Sand Dunes indicated as an important plant area.

The Project Area lies on the route of various migrating birds, across the Trace Region and the Bosphorus Strait.

Habitats

The habitats in the Project Area have been defined in very general terms in the EIA. With a short desktop study habitats in the Project Area are defined using the EUNIS habitat type classification (a comprehensive pan-European system that facilitates the harmonized description and collection of data across Europe, including Turkey) through the use of habitat identification criteria. In this regard, the EUNIS habitat classification of the Project Area is given on the map provided in Figure B3. This is a detailed habitat classification and for better understanding and evaluation a broader classification would be made.

Protected Species

Based on a limited field survey and literature research, flora and fauna species for the Project Area and vicinity are listed in the EIA.

In evaluating the threat/protection status of species; CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), Bern Convention, and Turkish Red Data Book (TRDB), which is based on the IUCN (International Union for Conservation of Nature) Red List classifications, and IUCN Red List classifications would be used.

Flora

With regard to flora, the main area of importance is the Agacli Sand Dunes, which is an important plant area. A small part of this area lies within the Project Area. Based on the currently available information other habitats in the Project Area are not identified as critically important with regard to flora.

The EUNIS code of the Agacli Sand Dunes habitat is B1 “Coastal dune and sandy shores”. Even with its proximity to Istanbul City, this habitat still carries its characteristics without significant degradation.

Amphibians

In the scope of studies undertaken and reported in the EIA, 8 amphibian species were identified for the Project Area. None of these species have significant threatening status with regard to IUCN classification. All of these species are classified as LC (Least Concern).

Reptiles

Habitat characteristics in the Project Area are suitable for various reptile species. Eighteen reptile species are reported for the Project Area and vicinity in the EIA. Among these 18 reptile species 10 are listed as LC category according to IUCN classification. Two species (*Testudo graeca, Testudo graeca ibera)* are in the category of VU (Vulnerable), and two species (*Emys orbicularis*, *Elaphe quatuorlineata*) are listed as NT (Near Threatened) according to IUCN Red List. The other four species are not listed in IUCN Red list.

Mammals

The mammals in the Project Area are mainly determined through literature survey studies conducted during the EIA studies. The number of mammal species identified are 14 and 9 of these are listed as LC according to IUCN Red List. Three species (*Vormela peregusna*, *Myotis capaccinii* and *Rhinolophus euryale*) are in VU category and two species

(*Rhinolophus euryale*, *Rhinolophus ferrumequinum*) are considered in NT category according to IUCN Red List.

Birds

The bird species that might be found in the Project Area and vicinity are listed below based on the limited desktop study and the available EIA report. These birds can be further classified as migrating, breeding and water and sea birds apart from their threatening status.

Table 4.6.1: Bird Species identified in the EIA

Species Name	Common Name	IUCN/Turkish Red Data Book
Podiceps nigricollis	Black-necked grebe	LC, Water bird
Puffinus yelkouan	Yelkouan shearwater	VU, Sea bird
Larus melanocephalus	Mediterranean gull	LC, Breeding bird
Hirundo daurica	Red-rumped shallow	LC, Migratory
Delichon urbica	Common house martin	LC, Migratory
Pica pica	Eurasian magpie	LC, Breeding bird
Corvus monedula	Eurasian Jackdaw	LC, Migratory
Sturnus vulgaris	European starling	LC, Migratory
Podiceps cristatus	Great crested grebe	LC, Water bird
Phalacrocorax carbo	Great cormorant	LC, Sea bird
Ardea cinerea	Grey heron	LC, Migratory
Larus marinus	Great black-backed gull	LC, Breeding bird
Streptopelia decaocto	Eurasian collared dove	LC, Breeding bird
Apus apus	Common swift	LC, Migratory
Circus cyaneus	Northern harrier	LC, Migratory
Scolopax rusticola	Eurasian woodcock	LC, Coastal bird
Hieraaetus pennatus	Booted eagle	LC, Migratory
Circaetus gallicus	Short-toed Snake Eagle	LC, Migratory
Aquila clanga	Greater Spotted Eagle	VU, Migratory
Anas acuta	Northern pintail	LC, Migratory
Ciconia nigra	Black stork	LC, Migratory
Ciconia ciconia	White stork	LC, Migratory
Pelecanus onocrotalus	Great White Pelican	LC, Migratory
Pelecanus crispus	Dalmatian Pelican	VU, Migratory
Grus grus	Common crane	LC, Migratory
Fulica atra	Common coot	LC, Breeding bird

IUCN reference: LC- Least Concern, VU - Vulnerable

Invertebrates

The EIA report does not mention invertebrates. Invertebrates would be mainly observed in the vicinity of water bodies and where the vegetation includes flowering plants.

Marine ecology

Marine ecology is not discussed in the EIA. Therefore, an assessment including field surveys is required to evaluate the potential impacts of the development on the marine environment.

4.7 Soil and Groundwater

The EIA did not address potential historical land contamination impacts associated with the Project Area. Mining activities have been undertaken in the area since the first quarter of the 20th century and therefore it is possible that contamination of the ground and groundwater has occurred. In additional, there are three landfill operations, the largest landfill operation is Tayakadın Landfill Site, located in the south western section of the Project Area and operated by the Municipality and is thought to have received construction materials. Two other, smaller, landfill operations are located in the south east of the Project Area, one is run by the Municipality (Agacli Landfill Site) and is reported as receiving construction waste and the other is Dunya Maden Landfill Site which is also in Agacli and privately run. It is not known whether other materials have been landfilled in the past. It is necessary to confirm the extent and magnitude of environmental liabilities in advance of earthmoving activities commencing.

4.8 Storm water and Water Resources

The Project Area is located 2.5 km east of Terkos Lake which is a drinking water source for Istanbul. There are two ISKI water transmission pipelines currently running through the Project Area (one disused at the time of writing this scoping report). The operational pipeline will be relocated as part of the airport development.

The Project Area includes some 70 ponds (all created as a result of the mineral working excavations) these are reported to be recharged by rain water. The site is not a designated water protection area and does not fall within the Terkos Lake catchment area.

There are no continuously flowing rivers or creeks in the Project Area. There are some intermittent river beds that carry run-off following precipitation, as can be seen from the topographical map of the region given in Figure B0. There are two creeks (Sogutlugol Deresi and Baliklidere) located to the south of the Project Area flowing (when charged) in a southerly direction.

4.9 Cultural Heritage

The EIA determined that there was no significant archaeological heritage in the Project Area. A letter from the Ministry confirms that no cultural heritage has been identified within the Project Area. Therefore, no baseline surveys are planned for the ESIA.

The main archaeology and cultural heritage interactions of the Project will be potential permanent direct effects on known and unknown buried archaeological resources within the Project Area.

4.10 Landscape and Visual Impact (LVIA)

The EIA did not address any aspects of LVIA associated with the airport. Therefore, a baseline for landscape visual impact associated with airport earthworks, construction and operation is required.

4.11 Transport

Roads

The proposed airport site is located 40km north east from the centre of the city of Istanbul. It is reported in the EIA that the North Marmara Motorway (including 3rd Bosphorus Bridge) Phase 1 and Phase 2 (Izzettin-Odayeri) Projects, which are in construction, passes adjacent

to the Project Area. In the planning of this Motorway, the location of the planned airport project and its connection roads were also considered. In addition, the existing Saray-Catalca – Hasdal State Highway passes to the south the Project Area.

The Hasdal-Kemerburgaz Highway passes from the south of the Project Area, Istanbul Ring Highway passes to the southeast of the Project Area, the Tayakadın-İhsaniye Road passes through the Project Area (12km section in the Project Area) and Ocunlu-Oklalı Highway and Catalca – Istanbul Highway lie to the west of the Project Area. The closest roads to the Project Area are Tayakadın-İhsaniye Road and Hasdal-Kemerburgaz Highway. The Tayakadın-İhsaniye Road is scheduled to be relocated to the south of the Project Area prior to airport construction activities progressing. The İhsaniye to Akpinar road crosses the Project Area and will be removed once the Project Area is made secure.

Railways

Currently there is no rail network to connect the Project Area with the city of Istanbul. Plans are in place to construct a connection between 2014 and 2019 and 2019+. There is a plan to construct a high speed rail link between Istanbul city and the Anatolian side of the city and Sabiha Gokcen Airport with INA.

4.12 Socio-economics

The Project Area supports 6,172 hectares of forest land including 660 hectares of different size ponds (70 in total) resulting from previous quarry excavation areas. There are six operational mines. In addition, an area of 298 hectares is being used for agricultural and stockbreeding purposes (236 hectares of pasture land, 60 hectares of dry farming, and 2 hectares of scrub). The Project Area lies within Arnavutkoy and Eyup Districts within a total area of 7,650 hectares. The nearest settlements to the Project Area are Tayakadin (350m west), Akpinar (250m east), Ihsaniye (150m south), Yenikoy village (200m northwest) and Agacli village which is located within the Project Area.

Infrastructure

The Project Area is in a region where socioeconomic characteristics show that middle income level people are residing within the region. In this regard, the area is transforming from being an agricultural rural area to being an industrial urban area. The social and economic infrastructure is developing in this regard in terms of economy, education, health and transportation. Istanbul is still attracting migration and the population in the area has a potential to increase as well.

According to the Address Based Population Registration System (ABPRS) 2012 results, the total population in the vicinity of the Project is 6,148 (see Table 4.12.1).

Table 4.12.1 Population in the Nearest Settlements

District	Village	Male	Female	Total
Arnavutkoy	Tayakadin	1,279	1,178	2,457
	Yeniköy	698	697	1,395
Eyup	Agacli	601	378	979
	Akpinar	605	538	1,143
	Ihsaniye	89	85	174
Total		**3,272**	**2,876**	**6,148**

Source: *TurkStat, ABPRS-2012*

The population of Arnavutkoy District is 206,299 with 86% being urban. The 15-64 age group comprises 65.2% of the population. The population of Eyup District is 356,512 with 98%

being urban and the 15-64 age group comprises 74.1% of the population in the District. The age group indicates that the economically active population in the District has a significant share within the total population.

The percentage of illiterate people in Arnavutkoy District is 3.9%. There are 58 education facilities around the District and 43,782 students are enrolled at these schools. There are 1,187 classrooms in these facilities and the number of students per classroom is 38 for primary school and 30 for high school. Additionally, 1,383 teachers are working in these schools.

The percentage of illiterate people in Eyup District is 2.6%. Around the District there are 130 education facilities and 65,282 students are enrolled at these schools. There are 1,422 classrooms in these facilities and the number of students per classroom is 47 for primary school and 45 for high school. Additionally, 2,385 teachers are working in these schools.

4.12.1 Resettlement and Land Expropriation

No Resettlement Action Plan (RAP) has been prepared for the development of INA. The EIA discussed the need for expropriation within the Project Area. There are six operational mines and 17 licences for mining in total and there are homes and businesses within the Project Area which require expropriation. Additionally, the expropriation process applies to an area of 298 hectares within the Project Area that is being used for agricultural and stockbreeding purposes. At the time of writing this report the extent of expropriation associated with the airport development is unknown.

5 Consultation

5.1 Consultation Carried Out Under the Turkish EIA

The Turkish EIA reports that a single Public Participation meeting was held on 06.11.2012 in Tayakadin, in Arnavotkoy Municipality. The meeting was attended by representatives from the Ministry of Environment and Urbanisation; the Directorate for Nature Conservation; the National Parks Directorate; the State Meteorology Affairs General Directorate and the project owner, the Transportation, Maritime Affairs and Communications (DHMI). Members of the public from the affected communities were invited to the meeting via advertisements in the local papers.

The meeting set out project details, confirming the proposed Project Area and potential environmental and social impacts. Available details regarding the proposed expropriation process were provided.

Questions were posed by the attendees and answers were provided.

5.2 Other Consultations Conducted

The Government has been conducting an expropriation process for fixed assets within the defined Project Area. Under Turkish Law the process entails the following: project approval; preparation of expropriation plans; identification of the property landowners and address investigation; expropriation decision; establishment of valuation commission and valuation process; establishment of negotiation commission and purchasing process.

Turkish expropriation works are mainly regulated by the “Expropriation Law”. This law includes procedures for processes to be undertaken during expropriation and establishment of easement rights, valuation of assets and resources, re-purchase of unused properties, the turnover process between institutions, relevant rights and responsibilities, and conflict resolution procedures. In accordance with the law, the Project Sponsor Organisation (PSO), DHMI in this case, is responsible for the execution of expropriation works.

During the valuation process, the following valuation criteria are considered:

- The nature of the land or building;
- The size of the land or building;
- All the characteristics and elements, which could affect the value of the land or building, including the separate value of those elements;
- Any taxes paid on the land or building;
- Previous amounts awarded in compensation for expropriation;
- The net income that could be obtained from the assets and/or resources, (without undertaking any changes, using the property with the same condition as it was at the expropriation date). For house plots, the amount for which similar house plots have been sold, without any change in the use to which it is put, prior to the date of expropriation;
- For buildings, official unit prices (from MoEU) at the expropriation date, estimates of the cost of rebuilding and depreciation for wear and tear; and
- Any other objective factors that could affect the valuations.

In February 2014, the Government passed a proposal to allow rapid expropriation to be undertaken to gain ownership of the fixed assets where agreements have not been reached.

5.3 Required Consultations With Potential Stakeholders

At the time of preparing this scoping report, IGA, had not undertaken any stakeholder engagement activities and is not in possession of the land. However, it will be necessary for IGA to develop a Stakeholder Engagement Plan (SEP) to be implemented at the earliest opportunity to engage with identified stakeholders, including local residents, local businesses and Government departments in order to introduce detailed information regarding the project programme and activities (an indicative list of Stakeholders is provided in Annex C). The SEP will identify the key stakeholders; most appropriate approaches to communication; programme of meetings and it will introduce a grievance mechanism. The grievance mechanism will allow concerned parties to register a formal concern with IGA. IGA will acknowledge receipt of the grievance (if contact details are provided); review the concern; internally investigate the basis for the concern; determine actions to address the concern, if required; provide a response to the concerned party and maintain records of the whole process.

6 Project Area of Influence and Cumulative Effects

6.1 Project Area of Influence

The minimum study area for conducting an ESIA for a project is defined as the area of influence (AoI) of the project. The AoI is generally larger than the project Area in order to address all possible relevant impacts. In this context, the impact area is the geographic area that may experience impacts to the biological, physical or socio-economic environments from expropriation, earthworks, construction and operation of the project components. This area will include the lands permanently and temporarily affected by the project features.

According to EBRD Performance Requirement 1, “area of influence may include one or more of the following, as appropriate:

(i) The assets and facilities directly owned or managed by the client that relate to the project activities to be financed (such as production plant, power transmission corridors, pipelines, canals, ports, access roads and construction camps).
(ii) Supporting/enabling activities, assets and facilities owned or under the control of parties contracted for the operation of the clients business or for the completion of the project (such as contractors).
(iii) Associated facilities or businesses that are not funded by the EBRD as part of the project and may be separate legal entities yet whose viability and existence depend exclusively on the project and whose goods and services are essential for the successful operation of the project.
(iv) Facilities, operations, and services owned or managed by the client, which are part of the security package committed to the EBRD as collateral.
(v) Areas and communities potentially impacted by: cumulative impacts from further planned development of the project or other sources of similar impacts in the geographical area, any existing project or condition, and other project-related developments that can realistically be expected at the time due diligence is undertaken.
(vi) Areas and communities potentially affected by impacts from unplanned but predictable developments caused by the project that may occur later or at a different location. The area of influence does not include potential impacts that would occur without the project or independently of the project.”

According to IFC Performance Standard 1; “the area of influence encompasses, as appropriate:

“The area likely to be affected by i) the project and the client’s activities that are directly owned, operated or managed (including by contractors) and that are a component of the project; (ii) impacts from unplanned but predictable developments caused by the project that may occur later or at a different location; or (iii) indirect project impacts on biodiversity or on ecosystem services upon which Affected Communities’ livelihoods are dependent.

Associated facilities, which are facilities that are not funded as part of the project and that would not have been constructed or expanded if the project did not exist and without which the project would not be viable.

Cumulative impacts that result from the incremental impact, on areas or resources used or directly impacted by the project, from other existing, planned or reasonably defined developments at the time the risks and impacts identification process is conducted".

The Turkish EIA did not define the project AoI clearly or in detail. The Turkish EIA defines the AoI very broadly, mainly taking the Alibey Dam, located at about 12 km southeast of the Project Area, and the planned Princci Dam (located at about 9 km southeast of the Project Area) as two milestones. It was stated that this judgement was based on the anticipated potential impacts of the project on the river beds passing through the Project Area and the possible impacts to these reservoirs. In this regard, in the Turkish EIA the AoI was considered to be a 12 km diameter circle taking the centre of the Project Area (expropriation area) as the central point of the circle.

Within this document, the AoI is defined thoroughly and the extent of the AoI varies from one topic to another, based on the consideration of all relevant environmental and social resources and potential impact on those resources separately. Also, it should be noted that during the course of the ESIA assessments, this AoI will be reviewed and updated as necessary. As with the whole ESIA process, this is an iterative process which is refined with the progress and the findings of the studies. Moreover, as stated in the next section the cumulative impacts would be considered in a broader area as required to consider not only the existing, but also the planned projects potential impacts together with the impacts of the proposed project. The baseline studies have been planned to cover all the relevant resources and environmental features in the defined AoI.

IGA has responsibility for the design, build and operation of the third Istanbul international airport. On this basis all elements of design, build and operation carried out within the defined Project Area boundary are within the project area of influence. In addition, the following activities would also be considered within the project AoI:

- Expropriation and resettlement activities;
- Impacts on the bird populations in the north east segment of Terkos Lake;
- Noise, air quality, congestion, lighting, visual impact on the four settlements that lie within 1km of the airport site boundary;
- Primary supply chain, such as, aggregate materials sourcing from quarries.

Table 6.1 summarizes the project AoI for different environmental and social topics. For all these topics different spatial extents (study area/AoI) need to be defined and studied in terms of baseline data collection and impact assessment. The specification of certain distances for various topics and detailed definitions are based on the existing environmental and social conditions in the region and study area, project description and layout provided in the available master plan and expected impacts associated with an airport project. All these factors have been evaluated and considered by the specialists in defining the AoI. Thus, knowledge and experience of the specialists involved in the study (expert judgement and previous experience), findings of the Turkish EIA report, and the opinion of the public (as reflected in the Turkish EIA process and in general) are taken into account.

Table 6.1: Project Area of Influence

Topic	Issue	Boundary	Receptor	Comment
Environmental & Social Impacts Within The Project Area Boundary (Project Footprint)	Design, build and operate within airport boundary.	Airport boundary/Project Site (within the predefined expropriation boundaries).	Natural resources and human settlements and facilities	
Resettlement	Receiving areas for displaced people.	If there are any designated relocation areas for settlements.	People/companies relocated as a result of expropriation and communities living in the relocation areas (if any)	Have to be mainly discussed in the scope of a Resettlement Action Plan (RAP) study. Just needs to be addressed in the ESIA.
Air Quality	Air quality during construction and operation.	5km along take-off and landing routes, and within an area of 3 km around the project site border based on the characteristics of the topography, locations of settlements in the area and the extent of potential air quality impacts from proposed construction activities, and operation of the airport with the site layout proposed in the master plan.	Population within the vicinity of the airport.	The modelling studies would cover a greater area to assess the impacts on air quality.

Topic	Issue	Boundary	Receptor	Comment
Noise	Noise during construction and operation.	5km along take-off and landing routes, and within an area of 3 km around the project site border based on the characteristics of the topography, locations of settlements in the area and the extent of potential air quality impacts from proposed construction activities, and operation of the airport with the site layout proposed in the master plan.	Population within the vicinity of the airport.	The modelling studies would cover this area and if findings show any necessity this area might be extended.
Forestry	Removal of forest from the project site.	Project Area and any new (compensation) plantation areas.	Location of compensation planting areas. Local population using existing forest area.	Locations for new planting areas would be provided by the IGA Forestry consultant and would be checked.
Water Quality	Potential (uncontrolled) releases to Black Sea and surrounding water bodies.	1km of airport border based on the available surface water sources and groundwater wells in the area. If there are any uncontrolled wastewater releases from the Project activities, the possible changes in water quality would be reflected in this range/distance and it is anticipated not to extend further.	Surface water bodies and groundwater.	Options with regard to wastewater management have not been confirmed yet.
Fresh Water Discharge	Dewatering of existing lakes in the Project Area.	Black Sea/local river beds within 1km of airport boundary based on the location of the existing lakes and availability of river beds in the area.	Black Sea/local river beds / domestic water supply system.	Options with regard to water discharge have not been confirmed yet. Upon confirmation the assessments would be made accordingly and the AoI might be adjusted if needed.

Topic	Issue	Boundary	Receptor	Comment
Water Use (Construction and Operation)	Increased impact on municipality water resources.	Project Area for construction. For operation it would be the water resources in the basin or water lines that supply water to municipality dams and from there to airport.	Regional population.	Options with regard to water supply have not been confirmed yet.
Electricity Use	Increased impact on energy resources.	Electricity transmission lines (ETL) to connect the airport to the national grid both to supply electricity during construction and operation.	Routes and vicinity of ETL connection to the site.	Routes have not been determined yet.
Fuel Use	Aviation fuel storage and transportation.	Project Area (where fuel would be stored) and the close vicinity (3km of airport boundary with regard to any associated risk based on the location of the storage area as given in the master plan and the potential risks due to fuel storage and the location of settlements which might be affected in case of a risk) and the transportation means of the fuel to site.	Storage area and settlements in the vicinity.	Transportation means have not been confirmed yet.
Landfills (in the Project Site)	On site landfills would continue to have fill capacity.	Project Area and locations for alternative landfill options.	Environmental components in the new receiving landfill areas.	The new landfill areas are not known.

Topic	Issue	Boundary	Receptor	Comment
Transport/Roads	Increased road traffic.	5km of airport boundary based on the local transportation network and roads and due to the fact that this distance covers all major highways and roads to be affected by project construction and operation activities.	Local community, road users (highway and secondary roads).	
Construction Materials Sourcing	Requirement for quantities of construction aggregate.	Locations of the material borrow areas.	Quarries, regional economy, transport mechanism.	Locations of the material borrow areas to provide fill and construction material to the project is not known.
Ecology				
Ornithology	Loss of habitat, migrating bird route.	Project Area, Terkos Lake, 3-5 km from the site boundaries especially in south direction based on the site characteristics and bird activity in the region including migration and the geographical extent of disturbance that could be caused by the construction and operation activities .	Birds and their habitats.	
Aquatic and Marine Ecology	Possible negative impact of uncontrolled discharges, habitat loss and other environmental emissions (such as noise and dust) on aquatic, marine environment and local fishing activities.	Project Area, 1km of airport border, 1 km off shore based on the available water resources in and the vicinity of the project area where aquatic and marine life and habitats could be affected due to project activities during construction and operation.	Aquatic and marine species and habitats.	Dewatering options have not been confirmed and requirement to build a jetty for fuel transportation have been confirmed, however the design requirements had not been confirmed at the time of writing this report.

Topic	Issue	Boundary	Receptor	Comment
Terrestrial Flora and Fauna	Loss of habitat and species of conservation concern.	Project Area and 1km of airport border based on the site characteristic and available species and to look at any alternative habitats for the species that can move away from the project area as well as the potential geographical extent of the disturbance to be caused by the project. The project footprint area would be the concern for flora and the potential adverse impacts of project activities on fauna would not extent further than about 1 km from the project site.	Flora and fauna species and habitats.	
Waste	Creation and management of wastes.	Project site for onsite waste handling and storage and waste management facilities in the region to receive the wastes generated due to project activities.	Increased volumes of waste requiring handling and transport.	Waste management options (on site and off site), final disposal and related transportation options have not been defined
Southern Highway Relocation	New highway being constructed to accommodate the north Marmara Highway.	No specific area except the route which is already under construction This project would be mentioned and considered in the scope of the ESIA studies.	Local community, environment air/land/ water/ waste/ visual impact.	Relocation of the highway passing through the Project Area has not been confirmed at this time. Once relocation is confirmed the study area should be at least 1 km either side of the new route. This is not IGA's responsibility but removal of the existing highway is required to allow the Project to commence. The existing studies and status would be referred to and considered under cumulative impact assessment.

6.2 Cumulative Effects

Cumulative effects (impacts) are changes to the environment caused by an action (project, project activity) in combination with other past, present and future human actions. Cumulative impacts can occur in various ways such as physical-chemical transport; gradual disturbance and loss of land and habitat; spatial and temporal crowding; and growth inducing potential. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

Assessment of cumulative effects requires consideration of the following concepts;

- consideration of impacts on Valued Ecosystem Components (VECs) due to both the project of concern and interactions with other past, existing and reasonably foreseeable future actions, and
- evaluation of significance in consideration of other than just local and direct effects (i.e., indirect impacts, cumulative impacts and impacts interactions).

An assessment of the possible cumulative effects of the proposed airport development in combination with other known projects, which have been consented nearby will be undertaken. The baseline studies would already allow accounting for the impacts of the present/existing and past projects in the area of influence. A key aspect of cumulative effect assessment is that it provides the opportunity for the project to be considered in terms of consented developments within the locality that have yet to be constructed and are therefore not yet part of the existing baseline. Details of the reasonably foreseeable future projects to be considered will be confirmed through discussions with the project team.

While it is understood that there are plans to build a canal, a city and a port to the south and west of the Project Area none of these plans are sufficiently advanced for information to be publicly available to be incorporated into the ESIA. The project will make best endeavours to understand the nature of these developments as work progresses and to communicate to the various project developers as details become available to understand the potential cumulative impacts associated with these developments.

The construction of the North Marmara Highway is underway and will pass to the south of the Project Area. Therefore, this development will fall within the cumulative impacts assessment. The construction of a metro system serving the greater Istanbul city area is also underway, with project programmes defining stages of development. Two phases of the construction will link the airport to central Istanbul and, therefore, those elements of the project that involve construction of metro lines and metro stations to serve the airport will form part of the cumulative assessment. Both these developments are being undertaken in isolation of the airport development and only the highway construction constitutes an associated facility within the context of the airport development, though the Consortium has no control or influence over the environmental impacts associated with the construction of the highway as this project is being undertaken by a different entity.

7 Potential Impacts and the Proposed Scope of the ESIA

The ESIA has been developed in acordance with international standards and good international practices. A review of the Turkish EIA was undertaken and a gap analysis was prepared (see Annex B). The current information regarding environment and social sensitivities associated with the INA project are provided in Chapter 4 of this scoping report. The gap analysis provides a baseline for development of methodologies for the collection of baseline data that will be used to conduct an assessment of the potential significant environmental and social impacts associated with the INA development. The impact assessment process will include the identification of mitigation and control measures whill will adopt the principles of avoid, mitigate and restore in line with the mitigation hierarchy. Residual impacts will also be assessed and control methods, including monitoring and measurement plans, will be identified for each particular topic area. Table 7.1 sets out inital potential environmental and social impacts associated with earthworks, construction and operation of the Istanbul International Airport Project.

Assessments will take into consideration requirements set out in the IFC Performance Standards (2012) and EBRD Environment and Social Policy (2008).

Potential impacts are evaluated under the following topics:

- Forestry
- Noise and Vibration
- Air Quality
- Resource Use: Energy and Water Consumption
- Lake Dewatering
- Climate Change and Carbon Management
- Ecology
- Soil and Groundwater
- Soil Erosion
- Storm Water and Wastewater
- Hazardous Material Management
- Waste Management

- Cultural Heritage
- Landscape and Visual Impact
- Transport
- Relocation of water and power transmission lines
- Socio-economics
- Resettlement
- Construction Camps
- Security
- Physical Hazards
- Chemical Hazards
- Explosive atmospheres and flammable materials
- Air traffic accidents

Table 7.1: Potential Impacts and Proposed Scope of the ESIA

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
Forestry	Earthworks and Construction	Six thousand one hundred and seventy two hectares of the Project Area are currently covered with forestry (both natural and artificial). There are trees within the Project Area and large proportion of them will be removed to enable earthworks to be undertaken and construction to start. The General Directorate of Forestry is responsible for cutting and	• An afforestation plan will be prepared to determine: the quality of the forest areas; the effects of the project on the forest area and; the effect of the options for reduction of adverse effects. This will include: • Definition of the study area; • Obtaining maps and satellite images (as available) for the study area; • Collection of background data and information as available; • Prepare maps for field studies; • Use ecological field surveys to support information on forest

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
		relocating/replanting the forestry from the Project Area in accordance with relevant Turkish legislation on forests.	conditions and species in the study area; and • Establish an inventory for the forest area. • Evaluation of forest areas to be preserved during earthworks and construction. • Compensatory habitat areas defined by the Turkish Ministry of Forestry will be reviewed to confirm appropriateness regarding net gain versus net loss. • If the areas which are not suitable for compensation purpose, new potential areas will be suggested and discussed with Ministry of Forestry.
Noise and Vibration	Earthworks and Construction	Earthworks excavations will result in noise emissions and vibrations as a result of earthworks and vehicle movements, pile drivers, and compacting.	The noise and vibration assessment will consist of the following steps: • Review of the Turkish Legislation to determine acceptable noise levels during construction and operation. • Determination of sensitive receptors (such as nearby settlements) to make baseline noise measurements. • Background noise measurements would be undertaken at nearby settlements, which would be potential receptors of noise to be generated during construction and operation. This survey will be conducted in accordance with ISO 1996-1:2003: “Acoustics -- Description, measurement and assessment of environmental noise -- Part 1: Basic quantities and assessment procedures”; ISO 1996-2:2007: “Acoustics -- Description, measurement and assessment of environmental noise -- Part 2: Determination of environmental noise levels”; ISO 1996-2: 1991: “Description and measurement of environmental noise - Part 2: Guide to the acquisition of data pertinent to land use”. • Preparation of the Construction Environment and Social

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
			Management Plan (CESMP) to avoid or minimise significant impacts of earthworks and construction operations on sensitive receptors.
	Operation	The most significant sources of noise and vibration from airport operations are during the landing and take-off cycles. Other sources of noise and vibration impact relate to ground operations equipment including aircraft taxing; operation of ground support vehicles; aircraft auxiliary power units (APUs) and aircraft engine testing activities where maintenance activities take place. Additional noise and vibration sources relate to the movement of vehicles accessing the airport.	• Review of international airport standards to determine acceptable noise levels of airport operation. • Modelling of aircraft noise based on planned fleet composition, runway configuration and hours of operation using ECAE:CEAC Document 29: 2nd Edition: 1997. Report on Standard Method of Computing Noise Contours around Civil Airports. • Preparation of noise mitigation guidelines for airport operations.
Air Quality	Earthworks and Construction	Fugitive dust emissions created during excavations and earth movements with the exposure and movement of soil can reduce air quality without the application of appropriate mitigation measures, as well as local exhaust emissions from excavation and construction vehicles.	The air quality assessment will consist of the following steps: • Review of the Turkish Legislation and international standards to determine acceptable air quality levels during construction. • Obtaining the project construction material needs, excavation and fill activities, movement of fill and excavation materials and their amounts, and construction schedule from the master plan/engineering team. • Determination of sensitive receptors (such as nearby settlements) to make baseline ambient air quality measurements of relevant air quality parameters (PM10, settled dust, SO_2, NOx, selected VOCs and trace metals in PM10/dust). All measurements and analyses would be conducted using ISO standards and by internationally

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
			accredited laboratories. • At the selected receptor points PM10 low volume samplers would be installed and 24 hours PM10 measurements would be conducted. For settled dust settled dust samplers would be used. For SO_2, NOx and selected VOCs, passive sampling would be conducted. • Modelling of air quality with regard to sensitive receptor, using AIRMOD or ADMS - airports modelling package. • Preparation of the CESMP to avoid or minimise significant impacts of earthworks and construction operations on air quality at sensitive receptors.
	Operation	The main sources of airport air emissions include combustion exhaust from aircraft during take-off and landing. Additional air emissions impacts result from ground service vehicles vapours from fuel storage and handling and emissions from ground handling activities. Combustion air emissions can also occur as a result of the combustion of fuel in electricity generation and heating (Combined Heat and Power Plant, etc.) purposes, and fuel combustion emissions during fire fighter training activities.	• Review of the Turkish legislation to determine acceptable air quality levels during operation. • Review of international airport standards (ICAO) to determine acceptable air quality levels of airport operation. • Obtaining the details of operational characteristics especially number of vehicles and planes to be operational at the airport per unit time of concern from the master plan/engineering team. • Modelling of aircraft operations and aircraft air emissions during the takeoff and landing cycle based on planned fleet composition, runway configuration and hours of operation using AIRMOD/EDMS or ADMS - airports modelling package. • Preparation of operational environmental management plans to avoid, minimise and mitigate significant impacts from air quality impacts at sensitive receptors.
Resource Use: Energy and Water	Earthworks and Construction	It is expected that the earthwork requirements will be delivered through cut and fill activities on site; there is no plan for marine dredging to	• The amount of energy, fuel and water required to support earthworks and construction will be identified and potential significant impacts will be assessed. • A resource management plan will be prepared to avoid,

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
Consumption		take place to support earthworks fill requirements. However, there will be a requirement for building materials to be sourced, such as aggregate, concrete and asphalt for airport buildings, facilities and surface treatments, including lime for soil improvement. Construction will require the availability of 10,000,000 m^3 of water for dust suppression activities, concrete batching and wash down activities. In addition, construction personnel will require water for welfare facilities. Fuel will be required for operating construction vehicles, machinery and equipment. Office facilities and worker accommodation will require heating (LPG) and lighting (electricity) during the whole earthworks and construction period.	minimise and control resource use during earthmoving and construction operations.
	Operation	The airport may consume significant levels of energy for space heating and cooling, internal and external lighting and operation of airport support operations such as baggage handling. Water consumption will take the form of passenger welfare requirements both in the terminals and on aircraft and terminal and aircraft cleaning activities.	• The amount of energy required to support the airport will be identified and potential significant impacts will be assessed. • The master plan identifies a Combined Heat and Power (CHP) plant to provide airport energy requirements. The master plan defines energy efficiency proposals for terminal buildings • Water consumption will be evaluated for the airport during operation and potential significant impacts identified. • As for other Turkish Government projects, the airport operation will potentially conform to LEED silver status requirements.

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
			• A resource management plan will be prepared to avoid, minimise and control resource use during airport operations.
Lake de-watering	Earthworks	There are 70 ponds within the Project Area and these will require de-watering in advance of the earthworks and construction programme commencing. The release of the fresh water from this activity could have an impact on the receiving environment.	• In conjunction with the project engineers the various options for de-watering will be identified and evaluated for potential significant environmental impact. • Data collected during the water quality assessment outlined above will provide information to decision making. • Proposals for further modelling of the de-watering activity will be presented so that the potential significant environmental impacts of the chosen de-watering approach can be managed.
Climate Change and Carbon Management	Earthworks, Construction and Operation	Emissions of greenhouse gases from fuel, energy consumption and combustion and storage arrangements.	The climate change/greenhouse gas assessment and carbon management will consist of the following steps: • Review of the Turkish legislation regarding these issues. • Obtaining relevant data regarding construction and operation activities, materials, machinery and equipment. • The development of the Greenhouse Gas (GHG) assessment will be based upon the EBRD guidance document; EBRD Methodology for Assessment of Greenhouse Gas Emissions - Version 7, 6 July 2010. • Accepted methodologies to calculate GHG emissions will be utilized including; IPCC Guidelines for National Greenhouse Gas Inventories, WRI/WBCSD GHG Protocol, ISO 14064, relevant EU Directive, IFC Carbon Emissions Estimation Tool, any credible nation specific data available (e.g. TUIK, Ministry of Energy and Natural Resources) on GHG emission conversion factors and Department for the Environment, Food and Rural Affairs (Defra), UK data sources (where only the cost of materials are available or no suitable emissions factor for a specific activity could be

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
			sourced). • With regard to carbon accounting a Tier One approach will be adopted, and wherever possible drawing on Tier Two principles where country-specific information is available. • Equator Principles III requirements regarding alternatives analysis requirements for GHG emissions will be conducted. • An assessment of the EU Emissions Trading Scheme with regard to the operations of INA (rather than airlines using INA will be undertaken. The environmental and social consultation and communication plan prepared for construction and operation will include a requirement to publish details regarding GHG emissions (if the data analysis identifies that the Project will emit over 100,000 tonnes of CO_2 equivalent annually.
Ecology	Earthworks and Construction	As a new development site there is the potential for ecological resources on and adjacent to the site to be impacted as a result of removal of natural habitats during site clearance, earthworks and construction. Noise and vibration associated with construction activities can also impact species resident in neighbouring areas of the site. The Project Area is located on a major migration route for birds travelling between Europe and Asia. (The study that will be conducted as a commitment within the scope of the Turkish EIA might be linked for mitigation measures and risk assessment.) Adjacent to the project Area is Lake Terkos	• The objectives of the studies on the ecological environment of the Project Area and the potential impact area (area of influence) are identification of the flora and vegetation types, and terrestrial and aquatic fauna (mammals, birds, reptiles, amphibians, fish, invertebrates) within the AoI to serve as a basis for determination of the impacts of the project on biological and ecological resources and to develop appropriate mitigation where necessary. • To achieve these objectives the information on the biological/ecological environment would be collected and compiled by following means: • Review of pertinent literature and previous works. • Field studies carried out in the project area. • Satellite image interpretation, as available. • Communication with the inhabitants in the study area during the field studies. • Consultation with the Nature Conservation Administration

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
		which is an International Bird Protection Area (IBPA). Removal of forestry and dewatering of artificial lakes to facilitate earthworks and construction will result in loss of habitat for ecological resources; such as, birds and aquatic and terrestrial animals. In addition, there is the potential for earthworks, construction and operational activities to impact the marine environment. Lighting arrangements during earthworks and construction can impact ornithological and terrestrial ecological resources.	and related agencies and institutions concerned. • The approach for conducting the baseline studies and surveys for the biological/ecological resources and sensitivities is summarized as follows: • Definition of the study area. • Obtaining maps and satellite images (as available) for the study area. • Collection of further background data and information (apart from the information available in the EIA report prepared for the Turkish MoEU). This task will also cover a literature survey; the literature survey will not be limited to the field study area, but will cover the area necessary to put the field study results into spatial context. • Preparation of maps for the field studies. • Surveys will be undertaken by appropriately qualified personnel. • Preparation of further detailed methods and programmes for field sampling, observations, and recording. • The observation and sampling locations will be identified based on previous knowledge of the area, expert opinion and available maps, images and information. These would be checked and adapted (if necessary) during the field surveys. • Establishing an inventory of species and preparation of maps. The conservation status of the identified species will be defined according to the Bern Convention, IUCN Red List and other relevant categories (e.g. Red List of Turkey, EU Habitats Directive) for the evaluation of the species for their importance. There will also be an assessment of whether a Critical Habitat Assessment/EU Habitats Directive “appropriate assessment” is required.

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
			• Data from each survey will be compiled to provide a baseline of information upon which an assessment of potential impacts from Project operations can be undertaken
	Operation	Ecological resources can be impacted by the operations of the airport in terms of noise and vibration disturbance. Birds flying across the take-off and landing areas can be involved in fatal strikes. Mitigation measures can be introduced to avoid this occurrence but there is a subsequent impact on the ecology of the area. Reduced air quality as a result of engine and fuel emissions from aircraft can impact species both on and in the vicinity of the airport. Lighting arrangements during airport operations can impacts ornithological and terrestrial ecological resources.	• The baseline survey described above will be used to determine potential ecological concerns during operation. An ecological management plan will be prepared to avoid or minimise the negative impacts of airport operations on ecological resources.
Soil and groundwater	Earthworks and Construction	Land contamination may be encountered during construction due to known or unknown historical releases of hazardous materials (such as ready mix products (concrete)) or oil or due to the presence of abandoned infrastructure formerly used to store or handle oils, diesels or other hazardous materials. The Project Area if characterised by landfill operations; reported as construction materials, which may constitute a source of historical	• A land condition survey will be conducted to identify and evaluate the extent and magnitude of environmental liabilities at the location, determining whether there are any Recognised Environmental Conditions (REC) and other Activity of Interests (AOIs). The work will be performed under ASTM Standard E1527-00, as applicable in Turkey. • Soil sampling during geotechnical investigation will take place to confirm or deny the existence of a release into the environment at an identified REC/AOI at levels above applicable national environmental regulations. The objective of the sampling and assessment will be to characterization of the specific nature and extent of any suspected contamination identified during the land condition survey

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
		contamination.	and provide a more accurate assessment of any potential environmental risk and cost associated with the development site, including general recommendations to mitigate any site contamination risks which have been identified. In the absence of RECs or AOIs. • If there was a confirmed release at a REC/AOI that may exceed the applicable environmental regulatory threshold limits, an evaluation of future sampling data needs for an Extent of Contamination study and suggested remedial actions will be prepared.
	Operation	Airport operations can result in instance of soil and groundwater contamination as a result of incorrect storage and handling of potentially contaminating substances.	• A review of the master plan will be undertaken to confirm potential contaminative sources during operations. • Appropriate storage and handling procedures will be incorporated into detailed design and management procedures.
Soil erosion	Earthworks and Construction	Exposure of soil surfaces to wind and rain during site clearance, earth moving and excavation can result in soil erosion. This can also result in sedimentation of surface drainage networks resulting in an impact to water quality.	• Prepare CESMP that adopts best construction practice to manage potential significant impacts associated with soil erosion and sediment runoff from exposed soil.
	Operation	Runoff from exposure soil areas within the airport perimeter.	• The master plan defines landscaping and grading of non-hard-standing/runway/taxiway areas to accepted international standards to include reduction in soil erosion on slope areas.
Storm Water and Wastewater	Earthworks and Construction	During construction, exposed soil can be washed into local water bodies resulting in siltation and increased suspended solids levels. Runoff of storm water can enter local	• A water quality assessment will be undertaken to establish a robust description of the baseline conditions in the Project Area and the area of influence (study area). In this regard, the surface water resources in the study area would be identified and water quality would be determined through

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
		watercourses resulting in increased turbidity, flow rates leading to increased erosion and potential for flooding in down-stream locations. Vehicle wash arrangements and batch and crushing plants can create waste water. The construction work force will increase the amount of sewage waste created in the Project Area and this will require treatment and disposal in accordance with national legal requirements.	on-site measurements, sampling and laboratory analyses. In addition, a literature survey would be conducted to gather previous studies and information regarding water availability, use and quality in the region. • The sampling and analyses program would reflect the overall water quality in the water resources, their present use (ecological and human use) and sources and their possible future uses. The baseline survey would include measurement/analyses of all relevant parameters as required under Turkish Legislation that would assist in defining the overall water quality of these water resources. The in-situ sampling and laboratory analyses would be conducted in line with the international standard methods in approved laboratories accredited according to ISO 17025 and by the Turkish Ministry of Environment and Urbanization. • As a result of these studies the status of the water resources in the study area would be determined and possible impacts of the project on these resources (through possible releases, leaks, increased siltation, etc.) would be assessed. This assessment would be based on the expected/estimated changes in the water quality due to construction and operational activities of the project including relevant mitigation measures to minimize these impacts to acceptable levels. • A review of earthworks and construction plans will be undertaken to confirm potential scenarios where risks are introduced to storm water and where waste water will be created. • A CESMP will be prepared which will incorporate best management practice with regard to managing storm water runoff from earthworks and construction operations. A routine monitoring programme will be proposed to provide

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
			on- going data regarding storm water quality and potential significant impacts. • Vehicle wash facilities, batch and crushing plants will be appropriately constructed to contain wash and waste water and direct it to appropriate treatment facilities prior to discharge. • Construction camps will be provided with waste water discharge systems that will be appropriately permitted.
	Operation	Storm water is mainly from runoff from paved surfaces and this may include pollutants associated with leaks and spills of oil, diesel and jet fuels during operation and maintenance activities. Storm water runoff can also include aircraft de-icing/anti-icing fluids which typically include ethylene or propylene glycol as well and runway and taxiway de-icing/anti icing fluids typically containing potassium acetate, sodium acetate, calcium magnesium acetate or mixtures of urea and water. Sanitary waste water is created from employees, passengers and from aircraft. Runoff from firefighting activities (both practice and actual responses) can present a risk to storm water systems.	• Relevant data from the water quality assessment outlined above will be used to provide a baseline for identifying the potential significant environmental impacts of storm water and waste water created during airport operations. • A review of the master plan will be conducted to identify potential for significant storm water and waste water impacts during airport operation. • The master plan identifies designated de-icing facilities around the airport which will be constructed to capture aircraft de-icing fluid. • The OEMP will describe approaches for runway storm water runoff to be directed to appropriate treatment facilities prior to being discharged. This will address runoff from runway de-icing and actual fire-fighting response activities. • The master plan identifies specific facilities for terminal waste water treatment which will be designed to match projected airport passenger capacities. Sanitary waste water collected from aircraft will be directed to the airport domestic waste water treatment system for disposal.
Hazardous Materials Management	Earthworks and Construction	During construction activities, fuels, lubricants and hydraulic oils are introduced to the project area to facilitate vehicle re-fuelling, maintenance and power generation. Incorrect	• A list of hazardous materials will be reviewed for the earthworks and construction period. Potential environmental and health and safety impacts will be evaluated. • Construction plans will define designated areas for design

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
		storage and handling practices can result in pollution of soil, groundwater and surface water (including sea) through uncontrolled releases. Additionally, it is possible that some areas of the site will have contaminated soil.	and storage of hazardous materials (such as concrete) being used on the project during earthworks and construction programmes. • The CESMP will define approaches for storage and handling of hazardous materials and handling contaminated soils.
	Operation	Airport operations will include handling and storage of fuels (jet fuels, diesel and gasoline) for both aircraft fuelling and ground handling activities. Fuels can be stored in above and below ground tanks and conveyed to dispensing locations via above or underground pipes that may be subject to accidental leaks. Use of liquid combustible materials and fire suppression foams and powders for firefighting drills also may result in releases to soil and surface water.	• A list of hazardous materials will be reviewed for airport operations. Potential environmental and health and safety impacts will be evaluated. • Design studies will define designated areas for design and storage of hazardous materials being used on the project during airport operations. • Operational management systems will be developed to control the storage, handling and use of hazardous materials associated with airport operations in order to avoid, minimise and control potential environmental and health and safety impacts associated with the use of materials.
Waste Management	Earthworks and Construction	During construction, various wastes will be produced, including, waste construction materials; waste excavation materials (that are unsuitable for use as fill material); scrap wood and metals; waste oils and chemicals from maintenance and re-fuelling activities; waste tyres; redundant vehicle and machinery batteries; food waste from project site catering facilities; general household waste from site office and construction camp operations. All wastes will need to be segregated and recycled/disposed in accordance with national	• A review of the construction plan will be undertaken to confirm the types of wastes that will be created during earthworks and construction programmes. Waste segregation will be promoted (in accordance with Turkish legal requirements and to promote the waste hierarchy). • Construction plans will define designated waste collection areas being used on the project during earthworks and construction programmes. • Operational management systems will be developed to control the creation, collection, storage and disposal of wastes to ensure that legal compliance and the waste management hierarchy can be applied. • A construction waste management plan will be prepared to

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
		legislative requirements.	ensure that legal compliance and the waste management hierarchy can be applied.
	Operation	The airport will generate solid, non-hazardous, food waste from catering facilities, packaging materials from retail facilities and paper, newspaper and a variety of disposal food containers from offices and common passenger areas. Waste will also be received from arriving aircraft and may contain food waste, disposable food containers and paper/newspaper materials. Airport maintenance activities will create waste in the form of waste oils and lubricants, redundant tyres and vehicle/ equipment batteries. Airport operations will generate liquid and solid hazardous wastes, such as, used lubricating oils, solvents, and oily rags from aircraft and ground service vehicle maintenance.	• A review of the operational plan will be undertaken to confirm the types of wastes that will be created during airport operations. Waste segregation will be promoted (in accordance with Turkish legal requirements and to promote the waste hierarchy). • Design studies will define designated waste collection and recycling/recovery areas on the project during airport operations. • Operational management systems will be developed to control the creation, collection, storage and disposal of airport wastes to ensure that legal compliance and the waste management hierarchy can be applied.
Cultural Heritage	Earthworks and Construction	There is a potential for artifacts associated with cultural heritage to be found during earthworks and construction activities.	The EIA has identified that there are no registered cultural heritage sites within the Project Area and this is confirmed by the Ministry. Therefore, there is no requirement for further surveys at this time. A “chance finds” procedure will be prepared to address possible “finds” during earthworks and construction.

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
Landscape and Visual Impact (LVIA)	Earthworks and Construction	Earth moving and construction activities can impact local amenity and have a visual impact. Site clearance and earthworks will impact on the existing visual amenity of the area. Neighbouring communities will be impacted by this change. During construction, light sources are required to facilitate night working, security and health and safety. These lighting arrangements can have a negative impact on the local community.	The LVIA would be prepared mainly in consistent with international requirements. The LVIA would be undertaken in accordance with the Guidelines for Landscape and Visual Impact Assessment (GLVIA) – Third Edition - Landscape Institute and Institute of Environmental Management and Assessment, 2013. Based on initial baseline appraisal and identification of potential impact generators an analysis drawing would be produced which identifies key landscape and visual considerations and constraints and which makes suggestions regarding possible design responses and mitigation measures in order to minimise significant effects. The assessment of residual effects would address the phased development of the site and would comprise an assessment of; • direct impacts in landscape fabric within the development site; • impacts on landscape and seascape character within the study area; • impacts on areas designated or classified on the basis of their landscape value; • visual impacts on key tourist and recreational receptors locations and transportation routes, including those off-shore; and • visual impacts on residential receptors and residents of settlements. In order to verify potential impacts, a series of viewpoints would be utilised which represent a range of the above sensitive

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
			receptors within the study area. The baseline assessment would consider conditions after dark also as a basis for the assessment of potential lighting impacts on neighbouring receptor locations. Where off-site elements are anticipated (e.g. road improvements or temporary accommodation works) the location concerned would be included in the assessment.
	Operation	The existence of a six runway airport and associated support activities will impact local amenity and have a visual impact. During operations light sources are required to facilitate night time airport operations and security and these lighting arrangements can have a negative impact on the local community.	As above.
Transport	Earthworks and Construction	Once the Project Area becomes an operational construction site roads providing access to Akpinar and sections of the Project Area will be closed. Much of this will impact mineral and landfill operations traffic, but these activities will cease within the Project Area once the land is handed to IGA. Construction will introduce traffic to and from the Project Area in the form of worker movements, excavation and earthworks vehicle movements and transfer of materials to	A manual traffic survey will be undertaken at three locations: two locations on the Tayakadin to Ihsaniye road and a third location on the Ishaniye to Akpinar road to confirm a baseline of traffic data within the Project Area of Influence, this will supplement existing published traffic data obtained from the General Directorate of Highways for the Tayakadin to Ihsaniye State Road that currently passes through the Project Area. This data will be evaluated against the projected vehicle numbers for earthworks and construction activities. Significant environmental impacts will be identified.

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
		and from the site.	
	Operation	The airport will introduce a number of passengers travelling to and from the airport to meet flights, this may increase the number of vehicle movements on the access roads around the airport contributing to congestion at peak times.	The master plan has estimated the levels of transport associated with the operational airport. This is a multi modal approach and defines different scenarios based on assumptions regarding typical mode of transport. Transport links are defined within the master plan and traffic management plans will be prepared by IGA to manage peak flows.
Relocation of water and power transmission lines	Pre earthworks	The operational ISKI pipeline and power transmission line currently running west-east across the Project Area are required to be relocated to the south of the Project Area. This will be undertaken prior to earthworks commencing and is expected to be incorporated into the construction of the North Marmara highway corridor to the south of the Project Area.	The relocation of the lines is the responsibility of the relevant authorities. It will be determined whether this relocation requires a separate EIA and this will be organised by the relevant authority.
Socio economics	Earthworks, Construction and Operation	By their nature, large scale development projects cause various social impacts. It is important to anticipate the potential impacts and take the required mitigation measures into consideration in order to prevent undesired consequences.	Within this context, a Social Baseline Survey/Study (including identification of stakeholders and engagement means) would be implemented in order to understand the socio-economic and cultural baseline in the vicinity of the Project Area. This baseline would be a basis for assessing the social impacts of project construction and operation. The aim of the social baseline survey would be collecting information to describe the socio-economic characteristics of the Project affected area and issues of concern for the local community to establish a socio-economic baseline for assessment of project impacts and development of relevant

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
			mitigation compensation measures. Primary and secondary data collection tools would be proposed which would include field surveys (key informant) and desktop studies (data collected by Turkish Statistical Institute and pertinent literature). Based on the project features and activities to be obtained from technical and engineering studies for the project and the baseline conditions determined from the baseline studies, the stakeholders would be identified and an engagement strategy would be proposed. In addition, the social impacts of the project on the area of influence and in a more general regional/national context would be assessed. Relevant mitigation and management measures associated with respect for human rights; labour and health and safety programmes; employment policies as well as monitoring activities (including a framework for grievance) would be developed and incorporated in the ESIA.
Resettlement	Pre earthworks	There are 6 operational mines within the project area and a total of 17 issued licences; forestry and farming activities along with a single settlement located in the south east of the Project Area. Additionally, there are three further settlements located within 500m of the boundary of the project area: Tayakadin; Yenikoy and Akpinar. There are mineral operations located adjacent to the northern boundary of the Project Area. The Turkish Government is responsible for	A social impact assessment will be undertaken to determine impacts on the local community and economy associated with the airport construction and operation (see socio economic section above). This will include the identification of affected people and an evaluation of the expropriation process. In accordance with EBRD Performance Requirements, a Resettlement Action Plan (RAP) needs to be prepared to understand the impacts of the resettlement activities on the affected people and organisations. A separate RAP will be prepared by IGA, if required. A Stakeholder Engagement Plan (SEP) will be prepared that defines stakeholder engagement

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
		land expropriation.	throughout earthworks, construction and operation.
Construction camps	Earthworks and Construction	It is estimated (at the time of writing this scoping document) that there will be an average of 12,000 employees at the peak time on the construction site. Workers will be accommodated within construction camps located in the Project Area. Workers will be sourced from Turkey and other countries depending on the available skill sets. This influx of people has the potential to impact the local community.	The plans for construction camps will be evaluated to confirm that they are developed in accordance with EBRD/IFC Guidance for Construction camps. Potential impacts associated with the influx of people to the camp will be evaluated. The CESMP will provide mimimisation, mitigation and control measures for managing the construction camps and ensuring that workers understand their responsibilities.
Security	Earthworks and Construction	The Project Area will be subject to security to restrict access to key parts of the site at key times. It is intended that security personnel will be appointed to conduct checks and ensure security is maintained at the site. Risks can arise from intentional or inadvertent trespassing.	The management of security personnel will include pre-checking of the credentials of the company and the individuals and the requirement to maintain a professional approach that safeguards rather than introduces risk to the local population and workforce.
	Operation	The airport will be subject to strict international security requirements with restricted access.	Approved security organisations will be appointed to maintain airport security.
Noise	Earthworks and Construction	Operation of noisy machinery and vehicles and blasting activities during earthworks can be a source for impacts on worker's health.	Evaluation of noise levels above national regulatory requirements will be identified during the noise assessment. Noise avoidance measures will be adopted in equipment choice; personnel will be restricted from noisy areas and where restriction is not possible personnel protective equipment will

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
			be introduced.
	Operation	The impact of aircraft noise on employees and contractors at the airport will need careful management. Operation of noisy equipment can impact employees and contractors	Evaluation of noise levels above national regulatory requirements will be identified during the noise assessment. Noise avoidance measures will be adopted in equipment choice; noisy areas will be designated; personnel will be restricted from noisy areas and where restriction is not possible personnel protective equipment will be prescribed.
Dust	Earthworks and Construction	Inhalation of dust from earthmoving, construction vehicle movement and fugitive emissions can impact workers health.	Air sampling will provide a baseline for air quality and an assessment will be made for sensitive receptors. Significant impacts of poor air quality will be identified and appropriate management approaches, such as, damping down; hours of working; and issuing respiratory protection equipment will be proposed.
Physical Hazards	Earthworks and Construction	These can take the form of over exertion, heat and cold stress, ergonomic injuries and illnesses associated with repetitive motion, over exertion and manual handling. Slips and falls on the same levels can occur as a result of poor housekeeping and unevenly prepared surfaces. Falls from height can be associated with working on elevated structures, ladders and scaffolding, work equipment and vehicles. Strikes by objects during earth moving and construction activities can result in injury, these can be falling objects, ejection of materials from machinery and movement of vehicles and	The physical hazards identified by the construction programme will be confirmed against this provisional list. In each case the potential for significant impact exists. A Health and Safety Management Plan will be prepared by the operator and risk assessments will form part of this approach and will confirm the actual risk associated with specific activities being undertaken during construction.

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
		machinery. Heavy equipment operators have limited fields of view close to the equipment and therefore pedestrians are at high risk when working near such equipment.	
	Operation	These can take the form of ergonomic injuries and illnesses associated with repetitive motion, over exertion and manual handling. Heat and cold stress. Slips and falls on the same levels can occur as a result of poor housekeeping and unevenly prepared surfaces. Falls from height can be associated with working on elevated structures, ladders and scaffolding, work equipment and vehicles. Health and safety impacts are associated with strikes by objects, ejection of materials from machinery and movement of vehicles and machinery around the airport. Restricted head room can result in striking injuries. Health impacts associated with working in confined spaces on aircraft or within areas of the airport infrastructure must be managed.	The physical hazards identified by operations will be confirmed against this provisional list. In each case the potential for significant impact exists. A Health and Safety Management Plan will be prepared by the operator and risk assessments will form part of this approach and will confirm the actual risk associated with specific activities being undertaken during construction.
Chemical Hazards	Earthworks and Construction	Chemicals, fuels and hazardous substances used on construction sites pose a risk to health and safety through inhalation, contact or ingestion if not correctly stored and handled.	• A list of hazardous materials will be reviewed for the earthworks and construction period. Potential health and safety impacts will be evaluated. • Construction plans will define designated areas for design and storage of hazardous materials being used on the project during earthworks and construction programmes. • A Construction Health and Safety Management Plan will be

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
			prepared by the operator and risk assessments will form part of this approach and will confirm the actual risk associated with specific activities being undertaken during construction. • The CESMP will define approaches for storage and handling of hazardous materials.
	Operation	Chemicals, fuels, de-icing and hazardous substances used on airport can pose a risk to health and safety through, inhalation, contact or ingestion if not correctly stored and handled.	• A list of hazardous materials will be reviewed for airport operations. Potential health and safety impacts will be evaluated. • Construction plans will define designated areas for design and storage of hazardous materials being used on the project during airport operations. • A Health and Safety Management Plan will be prepared by the operator and risk assessments will form part of this approach and will confirm the actual risk associated with specific activities being undertaken during construction. • Operational management systems will be developed to control the storage and use of hazardous materials associated with airport operations in order to avoid, minimise and control potential health and safety impacts associated with use of materials.
Traffic accidents	Earthworks, Construction and Operation	Increased vehicle movements can lead to an increase in road traffic accidents.	• The potential for road traffic accidents will be evaluated.
Explosive atmospheres and flammable materials	Earthworks and Construction	Fuel storage and dispensing on airports present a range of health and safety hazards and potential impacts.	Activities that create explosive atmospheres or incorporate flammable materials supply, storage and dispensing activities will be identified from the construction plan. The potential for explosive atmospheres will be evaluated. The appropriate risk assessments will be undertaken to confirm

Topic	Source of Impact	Preliminary Assessment	ESIA Scope
			to national legal requirements and management approaches will be incorporated into the Construction Health and Safety Management Plan to be prepared by the operator.
	Operation	Fuel storage and dispensing on airports present a range of health and safety hazards and potential impacts.	Activities that create explosive atmospheres or incorporate flammable materials supply, storage and dispensing activities will be identified from the construction plan. The potential for explosive atmospheres will be evaluated. The appropriate risk assessments will be undertaken to confirm to national legal requirements and management approaches will be incorporated into the Health and Safety Management Plan to be prepared by the operator.
Air traffic accident	Operation	Air traffic accidents are a relatively rare occurrence. But if one occurs at the airport then the environment and social impacts could be significant.	Potential environmental and social impacts associated with an air traffic accident will be assessed (using data collected during other surveys as defined above). IGA will prepare emergency plans for responding to such emergency scenarios.

8 Proposed Environmental Issues to be Scoped Out

Given the nature and size of this development it is considered that there are no issues to be scoped out of this Environment and Social Impact Assessment (ESIA).

Figures

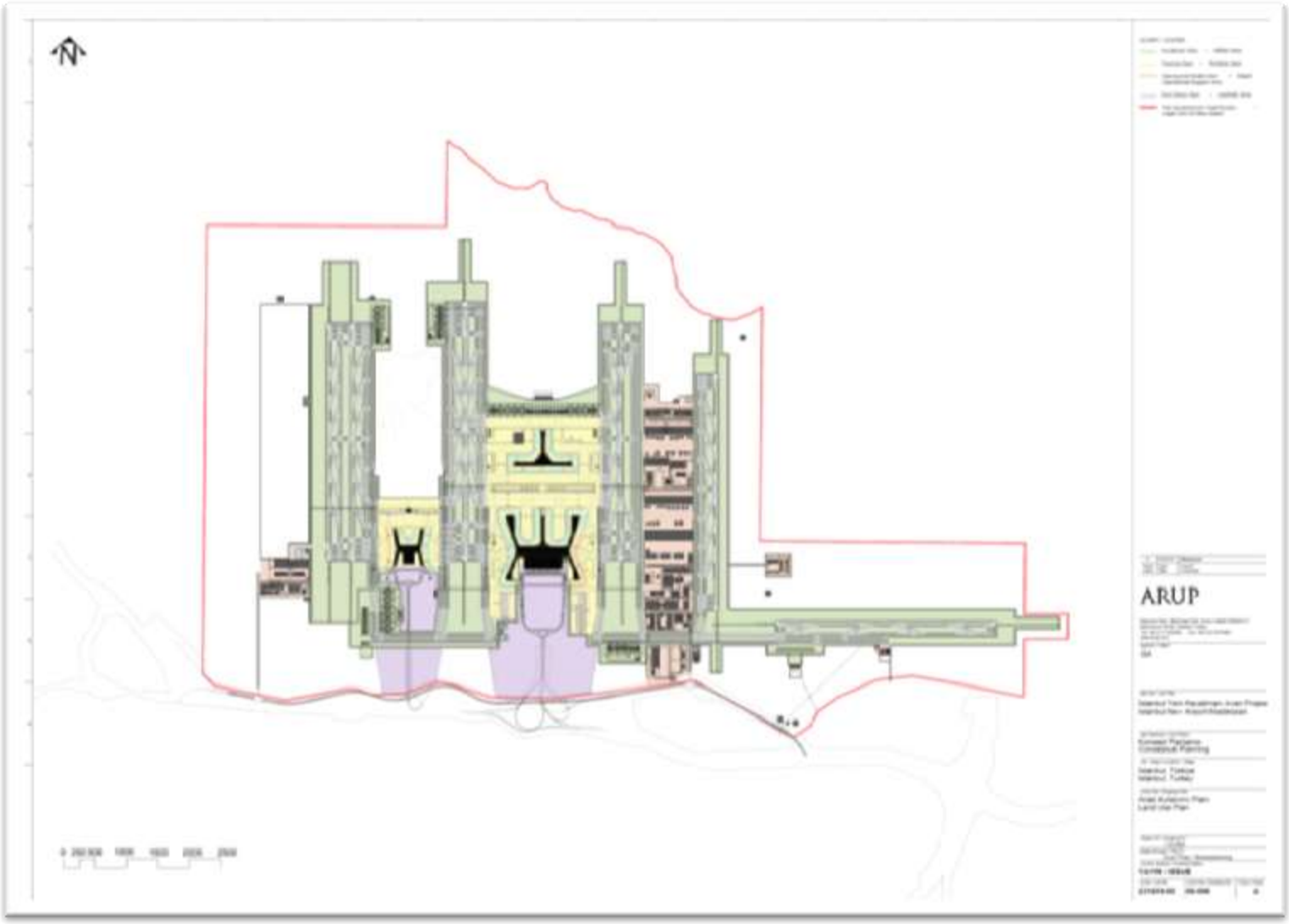


Figure A1: Airport Land Use. Source Arup master plan (December 2013)

Figure B0 - Istanbul Basin

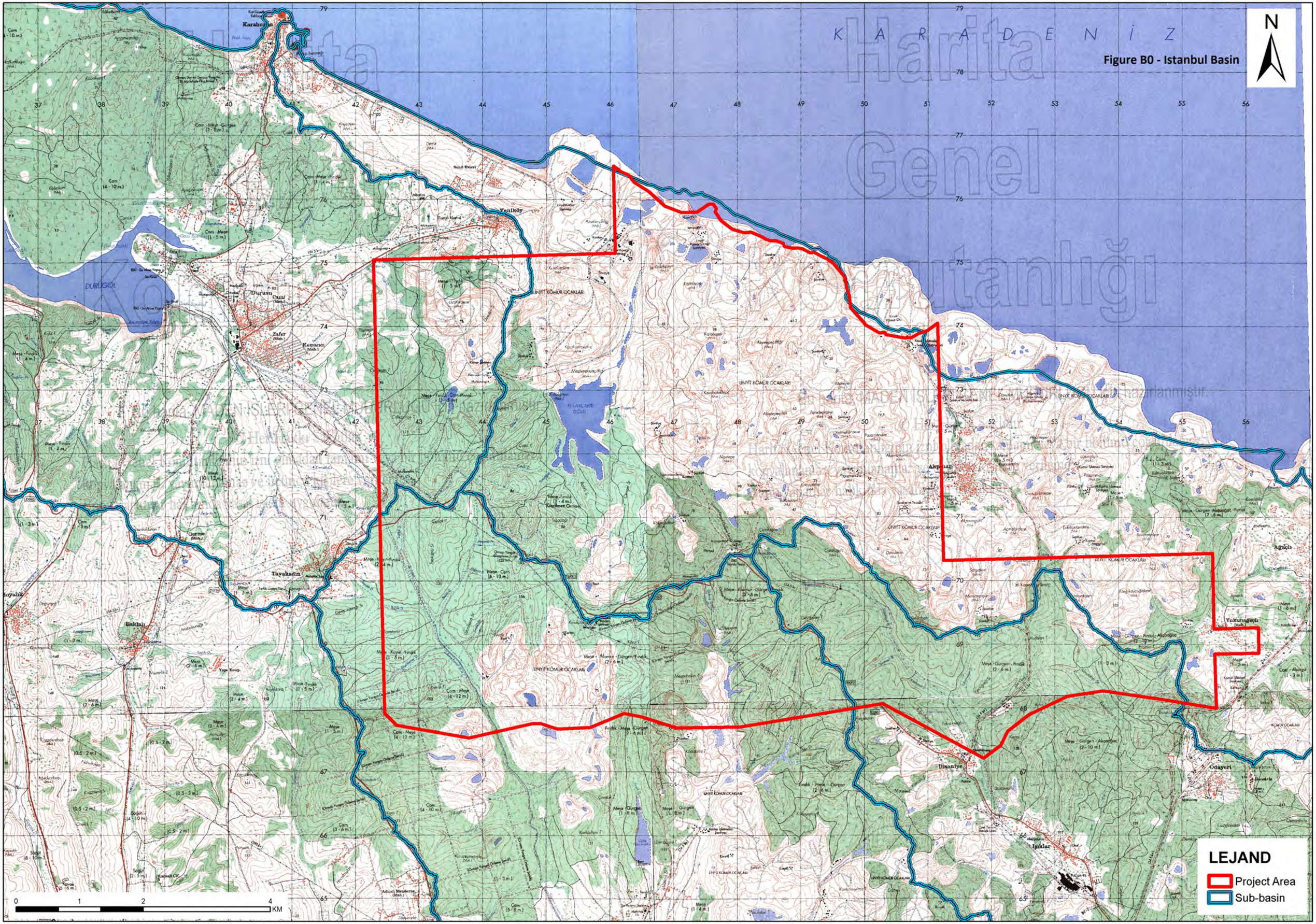


Figure B1 - Istanbul Protected Area

Black Sea

Marmara Sea

Bosphorus

Durusu Hunting Ban Area

Terkos Lake

Kulakcayiri Lake

Arnavutköy

Samlar Natural Park

Çatalca

Sazlidere Dam

Alibeykoy Dam

Çakir Pond

Buyukcekmece Dam

Buyukcekmece Hunting Ban Area

Büyükçekmece

Avcilar Hunting Ban Area

Küçükçekmece

Avcilar

Kucukcekmece Lake

Bakirköy

Bahçelievler

Zeytinburnu

Fatih

Gaziosmanpaşa

Kağithane

Beşiktaş

Şişli

Esenler

Bağcilar

Bayrampaşa

Beyoğlu

Güngören

Üsküdar

Ümraniye

Kadiköy

Sariyer

Eyüp

Feneryolu Wildlife Development Area

Ayvant Bendi Natural Park

Koprucubent Natural Park

Göktürk Pond Natural Park

Falih Rifki Atay Natural Park

Nesetsuyu Natural Park

Irmak Natural Park

Bentler Natural Park

Fatih Fountain Natural Park

Ponds

Mehmet Akif Ersoy Natural Park

Kirazlibent Natural Park

Fatih Forest Natural Park

Turkmenbasi Natural Park

Mihrabat Natural Park

Elmali-II Dam

620000 625000 630000 635000 640000 645000 650000 655000 660000 665000 670000 675000 680000

4585000 4580000 4575000 4570000 4565000 4560000 4555000 4550000 4545000 4540000 4535000

LEGEND

- Project Area
- Province Boundary
- District Boundary
- District Center

Protected Areas

- Lake Protected Zone
- Natural Park
- Wildlife Development Area
- Hunting Ban Area
- Lake-Dam-Pond

UTMED50 ZONE35

N

0 2 4 8 km

ISTANBUL 3rd AIRPORT PROJECT

Map of Protected Areas

encon

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Figure B2 - Istanbul Sensitive Area

Black Sea

Marmara Sea

Bosphorus

Important Bird Area
+
Important Plant Area
+
Important Area for
Fresh Water Fish

Important Plant Area

Important Plant Area

Important Plant Area

Important Bird Area

Important Bird Area
+
Important Plant Area
+
Important Area for
Fresh Water Fish

Important Bird Area

Arnavutköy

Çatalca

Büyükçekmece

Küçükçekmece

Avcılar

Bahçelievler

Bakırköy

Gaziosmanpaşa

Esenler

Bağcılar

Bayrampaşa

Güngören

Zeytinburnu

Fatih

Eyüp

Sarıyer

Kağıthane

Beşiktaş

Şişli

Beyoğlu

Üsküdar

Ümraniye

Kadıköy

620000 625000 630000 635000 640000 645000 650000 655000 660000 665000 670000 675000 680000

4585000 4580000 4575000 4570000 4565000 4560000 4555000 4550000 4545000 4540000 4535000

LEGEND

- Project Area
- Province Boundary
- District Boundary
- District Center

Ecologically Sensitive Areas

- Bosphorus
- Terkos Basin
- Kucukcekmece Basin
- Buyukcekmece Lake
- West Istanbul Pasture
- Agacli Sand Dunes
- Kilyos Sand Dunes

UTMED50 ZONE35

N

0 2 4 8 km

ISTANBUL 3rd AIRPORT PROJECT

Map of Ecologically Sensitive Areas

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Figure B3 - Istanbul EUNIS Habitat Classification

N

Legend

- Pelagic water column
- Coastal dunes and sandy shores
- Permanent eutrophic lakes, ponds and pools
- Temporary lakes, ponds and pools
- Surface running waters
- Temporary running waters
- Water-fringing reedbeds and tall helophytes other than canes
- Low and medium altitude hay meadows
- Moist or wet eutrophic and mesotrophic grassland
- Maquis, arborescent matorral and thermo- Mediterranean brushes
- Riparian and gallery woodland, with dominant Alnus, Betula, Populus or Salix
- Meso- and eutrophic Quercus, Carpinus, Fraxinus, Acer, Tilia, Ulmus and related woodland
- Mediterranean evergreen Quercus woodland
- Highly artificial coniferous plantations
- Lines of trees
- Sparsely- or un-vegetated habitats on mineral substrates not resulting from recent ice activity
- Intensive unmixed crops
- Mixed crops of market gardens and horticulture
- Residential buildings of villages and urban peripheries
- Disused constructions of cities, towns and villages
- Rural industrial and commercial sites still in active use
- Agricultural constructions
- Active opencast mineral extraction sites, including quarries
- Road networks
- Wooded steppe

0 0,5 1 2 KM

Annex A: Airport Facilities required by the Government Terms of Reference

The following facilities were identified in the reference Master Plan and form the project:

A: Air side facilities:

Runway

Taxiways

Access to appropriate areas (reword)

Aircraft standby area

Airport service road

Technical block and Air Traffic Control (ATC) tower

Ramp tower

Regional ATC building

Approach lighting

Airport service road tunnels

B: Passenger facilities

Domestic and international passenger terminal building

Fixed bridge holiday park area

Remote aircraft parking area

VIP terminal (General aviation) check

VIP apron

VIP guest house

VIP guest house apron

C: Cargo facilities

Cargo terminal building

Mail terminal building

Transportation companies cargo terminal building

Air cargo agents building

Air cargo agents parking area

Cold storage

D: Airport support facilities

Airport police station

Airport customs service

Airport ring road

Airport safety fence

Building apron barrier

Dog farm

Rescue and fire station

Airport fire training centre

Airport snow removal centre

Airport maintenance centre

Meteorological centre

Administrative buildings and airport reserve area

Airport staff mess

Airport health centre

E - Airlines Support Facilities

Aircraft Maintenance Hangars
Aircraft Maintenance Workshops
Aircraft Maintenance Apron
Compass Calibration Course
Engine Testing Course
Ground Handling Equipment Parking Area
Ground Service Equipment Maintenance and Administration Building
Ground Service Equipment Fuel Tank
Catering Centre
Aircraft Fuel Center
Aircraft Cleaning / Washing Area
De -icing area
Airlines Operations Center

F- Airport Transportation

Airport Approach Road Home
Secondary Airport Approach Road
Inputs and Nizamiyeler
Passenger Downloads Thrust Areas
Provide a link between the Light Rail Terminals
Passenger -storey car parks
Passenger car parks
VIP Passenger Parking Areas
Staff Car Park
Visitor Parking Lot
Taxi Waiting Area
Bus Waiting Area
Rent A Car Parking Space

G- Airport Service Buildings

Airport Power Distribution Centers
Track Lighting Transformer
Airport Heating & Cooling Centers
Drinking Water Pump Centre
Water Tank

Special Waste Disposal Area
Waste Water Treatment Centre
Solid and Hazardous Waste Sorting and Disposal Facility
Waste Collection Center

H- Aviation Related to Other Facilities

General Aviation Terminal Building
General Aviation Hangar
General Aviation Apron
Helicopter Hangar
Helipad

I- Airport City Complex

Fitness Center
Museums and Exhibition Halls
Conference Center
Cultural Center
Business Center
Mosque, Church , Synagogue
Hospital
Commercial Areas

Annex B: Turkish EIA Gap Analysis

Red – immediate; Amber – medium term, Blue – longer term.

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
1.1. Environmental and Social Assessment and Management System (ESMS)			
The project owner, in coordination with other responsible government agencies and third parties, as appropriate, will conduct a process of environmental and social assessment, and establish and maintain an ESMS appropriate to the nature and scale of the project and commensurate with the level of its environmental and social risks and impacts. The ESMS will incorporate the following elements: (i) policy; (ii) identification of risks and impacts; (iii) management programs; (iv) organizational capacity and competency; (v) emergency preparedness and response; (vi) stakeholder engagement; and (vii) monitoring and review.	Environmental risks and impacts of the Project are identified to some extent. However, the range of potential environmental and social impacts has not been identified, for example, there is no social assessment, or assessment of landscape and visual impacts, forestry and in many cases operation of the airport has been omitted in assessing impacts. The EIA does not discuss cumulative impacts. No ESMS has been prepared as part of the EIA.	Conduct a complete assessment of potential environment and social impacts associated with both airport construction and operation (some of these gaps/actions are further discussed under specific sections of this analysis). Complete an assessment of potential cumulative impacts. Establish a Project ESMS that describes mitigation and performance improvement measures and actions that address the identified environmental and social risks and impacts of the Project. Where the identified risks and impacts cannot be avoided, the client should identify mitigation and performance measures and establish corresponding actions to ensure the project will be operated in compliance with applicable laws and regulations, and meet the requirements of Performance Standards 1 through 8.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
1.2. Environmental and Social Action Plan (ESAP)			
The management programs will establish environmental and social Action Plans, which will define desired outcomes and actions to address the issues raised in the risks and impacts identification process, as measurable events to the extent possible, with elements such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods, and with estimates of the resources and responsibilities for implementation. As appropriate, the management program will recognize and incorporate the role of relevant actions and events controlled by third parties to address identified risks and impacts. Recognizing the dynamic nature of the project, the management program will be responsive to changes in circumstances, unforeseen events, and the results of monitoring and review. Action plans may include an overall Environmental and Social Action Plan necessary for carrying out a suite of mitigation measures or thematic action plans, such as Resettlement Action Plans or Biodiversity Action Plans. Action plans may be plans designed to fill in the gaps of existing management programs to ensure consistency with the Performance Standards, or they may be stand-alone plans that specify the project's mitigation strategy. The "Action plan" terminology is understood by some communities of practice to mean Management plans, or Development plans. In this case, examples are numerous and include various types of environmental and social management plans.	No ESAP has been created.	Prepare an ESAP that reflects the improvements and actions necessary to ensure that the project meets international standards during both construction and operation at each phase.	Project Developer
1.3. Organizational Capacity and Competency			
Where the project involves specifically identified physical elements, aspects and facilities that are likely to generate	Organisational arrangements and the competency of	Define project environment and social resources (construction,	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
impacts, the ESMS will establish and maintain an emergency preparedness and response system so that the client, in collaboration with appropriate and relevant third parties, will be prepared to respond to accidental and emergency situations associated with the project in a manner appropriate to prevent and mitigate any harm to people and/or the environment.	construction personnel have not been incorporated into the EIA.	consortium and operational) in terms of organisation and competency with regard to environment and social issues.	
1.4. Emergency Preparedness and Response			
Where the project involves specifically identified physical elements, aspects and facilities that are likely to generate impacts, the ESMS will establish and maintain an emergency preparedness and response system so that the client, in collaboration with appropriate and relevant third parties, will be prepared to respond to accidental and emergency situations associated with the project in a manner appropriate to prevent and mitigate any harm to people and/or the environment. This preparation will include the identification of areas where accidents and emergency situations may occur, communities and individuals that may be impacted, response procedures, provision of equipment and resources, designation of responsibilities, communication, including that with potentially Affected Communities and periodic training to ensure effective response. The emergency preparedness and response activities will be periodically reviewed and revised, as necessary, to reflect changing conditions.	No emergency scenarios, including response mechanisms, have been identified within the EIA.	Prepare and implement an emergency response plan for both construction and operational phases.	Project Developer
1.5. Monitoring and Review			
The project owner should establish procedures to monitor and measure the effectiveness of the management program, as well as compliance with any related legal and/or contractual obligations and regulatory requirements. Where the government	The EIA does not include an environment and social management plan, therefore it has not established a	Once adequate baseline data has been captured and potential environmental and social impacts have been assessed for both	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
or other third party has responsibility for managing specific risks and impacts and associated mitigation measures, the client will collaborate in establishing and monitoring such mitigation measures. Where appropriate, clients will consider involving representatives from Affected Communities to participate in monitoring activities. The client's monitoring program should be overseen by the appropriate level in the organization. For projects with significant impacts, the client will retain external experts to verify its monitoring information. The extent of monitoring should be commensurate with the project's environmental and social risks and impacts and with compliance requirements.	programme and procedures for monitoring activities and potential impacts to defined receptors. However, there is a monitoring plan specifying whether the environmental impacts of the project (for air, water quality, noise and vibration) will be in consistent with the Turkish Environment Law and related regulations.	construction and operational phases, a monitoring plan should be established to capture data to confirm that the project mitigation plans are delivering the desired results and that no unforeseen impacts are occurring.	
1.6. Stakeholder Engagement (PS 1 and PR 10)			
Stakeholder engagement is the basis for building strong, constructive, and responsive relationships that are essential for the successful management of a project's environmental and social impacts. Stakeholder engagement is an on-going process that may involve, in varying degrees, the following elements: stakeholder analysis and planning, disclosure and dissemination of information, consultation and participation, grievance mechanism, and on-going reporting to Affected Communities. The nature, frequency, and level of effort of stakeholder engagement may vary considerably and will be commensurate with the project's risks and adverse impacts, and the project's phase of development.	The EIA reports that a single, formal, information disclosure exercise has been carried out regarding the project. This occurred at the start of the EIA process. No further information disclosure activities have been undertaken prior to the EIA report being finalized. The EIA does not describe any stakeholder engagement and therefore it is assumed that none has been undertaken.	A stakeholder engagement plan should be prepared to address project start up, construction and operation. This should be a two way process of giving and receiving information. It should involve the local, regional and national communities as applicable to the project.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
1.7. External Communications and Grievance Mechanisms			
The project owner should implement and maintain a procedure for external communications that includes methods to (i) receive and register external communications from the public; (ii) screen and assess the issues raised and determine how to address them; (iii) provide, track, and document responses, if any; and (iv) adjust the management program, as appropriate. In addition, clients are encouraged to make publicly available periodic reports on their environmental and social sustainability. Where there are Affected Communities, the client will establish a grievance mechanism to receive and facilitate resolution of Affected Communities' concerns and grievances about the client's environmental and social performance. The grievance mechanism should be scaled to the risks and adverse impacts of the project and have Affected Communities as its primary user. It should seek to resolve concerns promptly, using an understandable and transparent consultative process that is culturally appropriate and readily accessible, and at no cost and without retribution to the party that originated the issue or concern. The mechanism should not impede access to judicial or administrative remedies. The client will inform the Affected Communities about the mechanism in the course of the stakeholder engagement process.	The EIA does not address external and internal communication, consultation or stakeholder engagement. Therefore, no procedures have been proposed for provision of information or receiving comments and grievances regarding the project plans.	A communications plan and procedure (including identification of Affected Communities) should be prepared that describe mechanisms for external communications on environment and social topics. The plan should define how grievances and concerns can be made to the project and how these will be investigated, responded to and rectified, if appropriate.	Project Developer
1.8. On-going Reporting to Affected Communities			
The project owner should provide periodic reports to the Affected Communities that describe progress with implementation of the project Action Plans on issues that involve on-going risk to or impacts on Affected Communities and on	The EIA does not define Affected Communities (see above) and therefore there is no definition of	Reporting to Affected Communities should be included within the Communication Plan and Procedure.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
issues that the consultation process or grievance mechanism have identified as a concern to those Communities. If the management program results in material changes in or additions to the mitigation measures or actions described in the Action Plans on issues of concern to the Affected Communities, the updated relevant mitigation measures or actions will be communicated to them. The frequency of these reports will be proportionate to the concerns of Affected Communities but not less than annually.	communication and reporting.		
2. LABOR AND WORKING CONDITIONS (PS 2, PR 2 AND PR 10)			
2.1. Human Resources Policy			
The project owner should adopt and implement human resources policies and procedures appropriate to its size and workforce that set out its approach to managing workers consistent with the requirements of this Performance Standard and national law. # The client will provide workers with documented information that is clear and understandable, regarding their rights under national labour and employment law and any applicable collective agreements, including their rights related to hours of work, wages, overtime, compensation, and benefits upon beginning the working relationship and when any material changes occur.	There is no Human Resources (HR) Policy for the project.	Prepare a Human Resources Policy.	
2.2. Working Conditions and Terms of Employment			
The project owner should establish a mechanism to maintain, and improve the worker-management relationship and should also promote compliance with national employment and labour	There are warnings about how the workers should prevent any harmful effects	Prepare a project handbook that covers working conditions and employment arrangements.	

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
laws.	that may arise during construction and operation phases. However, detailed working conditions or terms of employment are not mentioned in the EIA report.		
2.3. Vulnerable Workers such as Child Labour, Forced Labour, Non-Discrimination and Equal Opportunity			
The project owner should establish a mechanism to protect workers, including vulnerable categories of workers such as children, migrant workers, forced labour, workers engaged by third parties, and workers in the client's supply chain while it should also provide a tool to promote safe and healthy working conditions, and the health of workers.	The EIA does not address worker employment and therefore, there is no documented or formal policy of non-discrimination, equal opportunity and fair treatment in the EIA.	Prepare an Equality and Diversity Programme that defines protection of employees, contractors and suppliers.	
2.4. Worker's Organizations			
In countries where national law recognizes workers' rights to form and to join workers' organizations of their choosing without interference and to bargain collectively, the client will comply with national law. Where national law substantially restricts workers' organizations, the client will not restrict workers from developing alternative mechanisms to express their grievances and protect their rights regarding working conditions and terms of employment. The client should not seek to influence or control these mechanisms. In either case described in previous paragraph of this Performance Standard, and where national law is silent, the client will not discourage workers from electing worker representatives, forming or joining workers' organizations of	The EIA does not address worker employment.	See item 2.2 above for action.	

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
their choosing, or from bargaining collectively, and will not discriminate or retaliate against workers who participate, or seek to participate, in such organizations and collective bargaining. The client will engage with such workers' representatives and workers' organizations, and provide them with information needed for meaningful negotiation in a timely manner. Workers' organizations are expected to fairly represent the workers in the workforce.			
2.5. Grievance Mechanism			
The client will provide a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns. The client will inform the workers of the grievance mechanism at the time of recruitment and make it easily accessible to them. The mechanism should involve an appropriate level of management and address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned, without any retribution. The mechanism should also allow for anonymous complaints to be raised and addressed. The mechanism should not impede access to other judicial or administrative remedies that might be available under the law or through existing arbitration procedures, or substitute for grievance mechanisms provided through collective agreements.	The EIA does not address worker employment.	See item 2.2 above for action.	Project Developer
3. RESOURCE EFFICIENCY AND POLLUTION PREVENTION/ABATEMENT (PS 3 AND PR 3)			
3.1. Resource Efficiency			
The project owner should implement technically and financially feasible and cost effective measures for improving efficiency in	The EIA does not address resource consumption and	Prepare an evaluation of potential resource efficiency during	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
its consumption of energy, water, as well as other resources and material inputs, with a focus on areas that are considered core business activities. Such measures will integrate the principles of cleaner production into product design and production processes with the objective of conserving raw materials, energy, and water. Where benchmarking data are available, the client will make a comparison to establish the relative level of efficiency.	resource efficiency measures.	construction and operation. Define potential impacts and develop approaches for avoidance, minimisation and use of alternative materials in order to reduce the project impact on natural and scarce resources.	
3.2. Pollution Prevention and GHG emissions			
The project owner should avoid the release of pollutants or, when avoidance is not feasible, minimize and/or control the intensity and mass flow of their release. This applies to the release of pollutants to air (including GHG emissions), water, and land due to routine, non-routine, and accidental circumstances with the potential for local, regional, and transboundary impacts. Where historical pollution such as land or ground water contamination exists, the project should seek to determine whether it is responsible for mitigation measures. It is also important to address potential adverse project impacts on existing ambient conditions, the client will consider relevant factors, including, for example (i) existing ambient conditions; (ii) the finite assimilative capacity of the environment; (iii) existing and future land use; (iv) the project's proximity to areas of importance to biodiversity; and (v) the potential for cumulative impacts with uncertain and/or irreversible consequences. In addition to applying resource efficiency and pollution control measures as required in this Performance Standard, when the project has the potential to constitute a significant source of emissions in an already degraded area, the project should consider additional strategies and adopt measures that avoid or	Baseline information is provided in the EIA on air emissions, wastewater, solid wastes, hazardous wastes and noise. The EIA assessments have focussed on construction phases and have not addressed operational phases for each of these elements. With regard to air quality assessments have only been undertaken for PM_{10} and no other potential pollutants and noise impacts were only considered during construction activities not during operation. The EIA provides no information regarding the potential contamination of	Baseline information regarding potential environmental impacts is incomplete, therefore supplementary studies are required to establish the correct baseline conditions across the range of parameters. Baseline information must be captured for topics such as potential contaminated land and environmental impacts associated with the soil movement required by the earthworks. All assessments should address current conditions and potential future impacts of project construction and operation.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
reduce negative effects. These strategies include, but are not limited to, evaluation of project location alternatives and emissions offsets.	land associated with historical use and does not discuss the environmental and social impacts associated with the volumes of soil movements proposed in the earthworks activities.		
4. COMMUNITY HEALTH, SAFETY AND SECURITY (PS 4 AND PR 4)			
The project should anticipate and avoid adverse impacts on the health and safety of the Affected Community and ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks to the Affected Communities.	The EIA does not address safety and security issues and there is no discussion regarding the environmental and social impacts associated with construction camps and the influx of temporary/migrant labour to support construction activities. The EIA does not address community health, safety and security associated with airport operations.	Assess the safety and security risks associated with construction and operation of the airport on the community and develop a plan to mitigate and manage risks.	Project Developer
5. LAND ACQUISITION, INVOLUNTARY RESETTLEMENT AND ECONOMIC DISPLACEMENT (PS 5 AND PR 5)			
Unless properly managed, involuntary resettlement may result in long-term hardship and impoverishment for the affected	The EIA discusses the land acquisition process in Turkey	The developer is not responsible for the acquisition of land, however, it	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
Communities and persons, as well as environmental damage and adverse socio economic impacts in areas to which they have been displaced. For these reasons, involuntary resettlement should be avoided. However, where involuntary resettlement is unavoidable it should be minimised and appropriate measures to mitigate adverse impacts on displaced persons and host communities should be carefully planned and implemented. The Government often plays a central role on the land acquisition and resettlement process, including determination of compensation, and is therefore an important third party in many situations. The Project should anticipate land acquisition processes and where possible the client should get involved in the resettlement activities. Clients should consider using negotiated settlements.	and but there is no discussion regarding Affected Persons and resettlement activities and impacts.	should engage with the Government to understand the acquisition process and the plans for resettlement. If the Government does not have an acquisition and resettlement action plan (RAP) then one should be prepared and implemented in conjunction with the external communication and stakeholder engagement plans It should be noted that there is a high risk that the project will struggle to gain international financing if the land acquisition process is regarded as non-compliant against international financing requirements and it will be impossible to retrospectively address the international requirements.	
6. BIODIVERSITY CONSERVATION AND SUSTAINABLE MANAGEMENT OF LIVING NATURAL RESOURCES (PS 6 AND PR 6)			
The project should consider how to protect and conserve biodiversity and the sustainable management of living natural resources.	The EIA has provided inadequate baseline data regarding project biodiversity and natural habitats and the potential impacts associated with the project during construction and operation. The EIA reports that a site	Robust sampling methodologies and plans should be prepared to inform surveys for all identified habitats and species to ensure that robust baseline data is obtained to inform the assessment of potential impacts, mitigation and compensation	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
	vegetation survey was undertaken in October 2012. No other project site surveys are reported as having been undertaken. The EIA reports that ecological species and habitat evaluations were undertaken through habitat evaluation and literature review. The Project site is in a partially undeveloped location with benefit of forestry and scrub landscape, furthermore the project site contains a number of natural and man made water bodies and borders the Black Sea to the north. The Project site is located within the migratory route for birds migrating between the European and Asian continents. Robust sampling exercises have not been described and conducted to confirm baseline ecological value and allow analysis of potential impacts associated with project construction and	strategies.	

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
	operation.		
7. INDIGENOUS PEOPLES (PS 7 AND PR 7)			
Performance Standard 7 recognizes that Indigenous Peoples, as social groups with identities that are distinct from mainstream groups in national societies, are often among the most marginalized and vulnerable segments of the population. In many cases, their economic, social, and legal status limits their capacity to defend their rights to, and interests in, lands and natural and cultural resources, and may restrict their ability to participate in and benefit from development. Indigenous Peoples are particularly vulnerable if their lands and resources are transformed, encroached upon, or significantly degraded. Their languages, cultures, religions, spiritual beliefs, and institutions may also come under threat. As a consequence, Indigenous Peoples may be more vulnerable to the adverse impacts associated with project development than non-indigenous communities. This vulnerability may include loss of identity, culture, and natural resource-based livelihoods, as well as exposure to impoverishment and diseases.	The EIA does not discuss indigenous peoples.	An assessment should be made of whether there are any indigenous peoples within the project area of influence and a statement produced to confirm presence or absence and if present to develop and appropriate management approach.	Project Developer
8. CULTURAL HERITAGE (PS 8 AND PR 8)			
8.1. Chance Find Procedure			
An (accidental) chance find procedure has to be developed by the project including the planning and construction phases of the project.	The EIA does not discuss cultural heritage issues and therefore there is no proposed chance finds procedure.	Develop a chance finds procedure for Project construction and operation.	Project Developer
8.2. Adverse Impact on Cultural Heritage			

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
The project should consider the protection of cultural heritage from the adverse impacts of project activities and support its preservation.	The EIA does not discuss the conduct of a baseline study for the cultural heritage in and around the project area, nor does it discuss potential Project impacts on cultural heritage.	Conduct a baseline assessment to establish cultural heritage value of the project site.	Project Developer
9. Financial Intermediaries (PR9)			
Financial Intermediaries in receipt of lending from EBRD are required to apply the EBRD Environment and Social Policy (2008) requirements.	This element is not required in the EIA.	It is understood that this is not applicable to the project at this time.	Not applicable.

Annex C: Indicative Stakeholder List

(to be confirmed through preparation of the SEP)

- DHMI (Project Sponsor)
- Ministry of Forestry (and other relevant governmental agencies)
- Residents of settlements of Akpinar; Yenikoy; Tayakadin; Ihsaniye and Yukari Agacli.
- Residents located in the northern section of Arnavutkoy District
- Quarry and Mine Operators within the Project Area
- Employees and suppliers of the mines and quarries
- Farmers using the Project Area for livestock grazing
- Municipality of Eyup
- Municipality of Arnavutkoy
- Amenity users of the Project Area
- Non-Government Organisations (NGOs)
- Universities (local and national)

Annex 6.B: Environmental Impact Assessment Gap Analysis

Istanbul New Airport
Environmental Impact Assessment
Gap Analysis

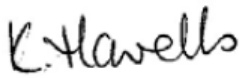
Prepared for:
IGA
Istanbul, Turkey

Prepared by:
ENVIRON
Bath, UK

Date:
September 2013

Project or Issue Number:
UK14-19216

ENVIRON

Contract No:	UK14-19216
Issue:	1
Author (signature):	
Project Manager/Director (signature):	Valéry Votrin/Denise Wright 
Date:	September 2013

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1 Background to the Project and Gap Analysis

1.1 Project Description

Istanbul Third Airport Project (the Project) will be implemented by the Consortium of Limak, Cengiz, Kolin, MAPA and Kalyon. The agreement is with the General Directorate of State Airports Authority (DHMI) for a 25 year period. Permission has been given to the Consortium to build, own-operate, and transfer the new airport. It has to be noted that, the contract that will be signed with the state is still pending. The Project area sits within Arnavutkoy and Eyup Districts within a total area of 76,500,000m2 (Figure 1).

Figure 1: The Project Area and its Vicinity

Project construction will be implemented in four main phases. Phase 1 will serve a capacity of 70 million passengers annually which then will be developed to Phase 4 with a capacity of 150 million passengers annually (Figure 2).

1.2 Necessity for a Gap Analysis and Reference Documents

An Environmental Impact Assessment (EIA) Report was prepared in May 2013 for Istanbul Third Airport Project (the Project). The EIA Report was approved by the Ministry of Environment and Urbanization (MoEU). However, in order for international financial institutions (IFIs) to fund the development of the Project, there is an additional requirement for the EIA to comply with international environmental and social standards.

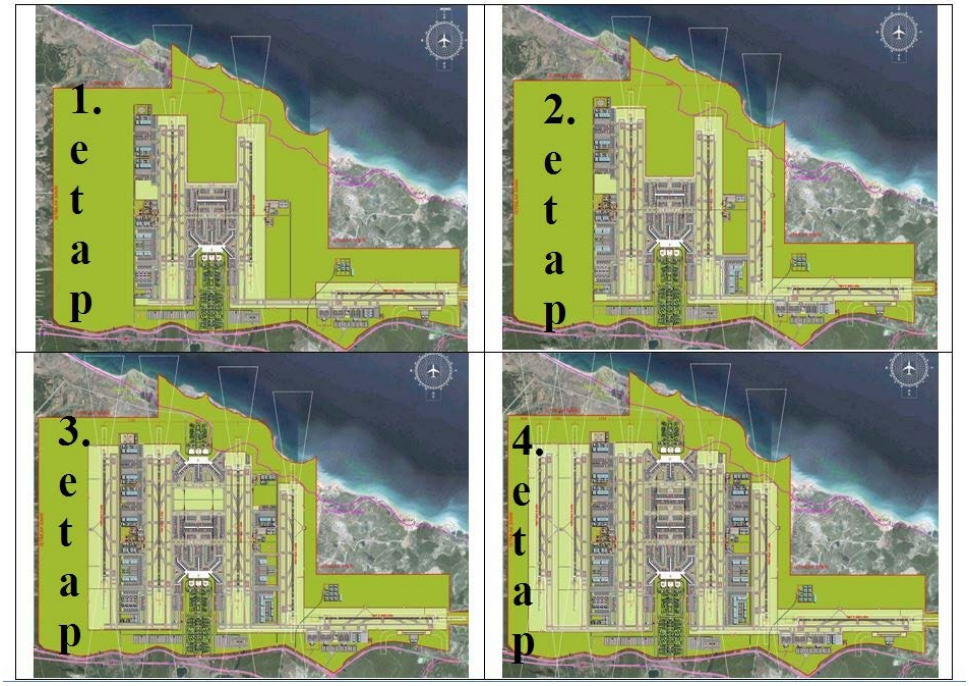
In order to be a basis for an international environmental and social impact assessment study and prepare an Environmental and Social Impact Assessment (ESIA) Report that meets the requirements of International Finance Corporation (IFC)'s Performance Standards (PS) on Social and Environmental Sustainability and European Bank for Reconstruction and

Development (EBRD)'s Performance Requirements (PR), a gap analysis of the existing EIA Report is required.

This gap analysis has been conducted to understand the Project's implementation status with respect to international environmental and social standards. The reference documents used for the gap analysis are listed below:

- Final EIA Report prepared for the Project (May 2013);
- IFC's Performance Standards on Social and Environmental Sustainability (2012) and World Bank Policies;
- IFC Environmental Health and Safety Guideline for Airports (2007); and
- EBRD's Performance Requirements (2008).

Figure 2: Phases of the Project



1.3 Legal Framework

National and international legal frameworks that are applicable to the Project are explained in this section.

1.3.1 Background of International Financial Institutions

International financial institutions follow certain policies and procedures regarding environmental and social impacts of the projects to be financed. In this regard, they require fulfilment of generally accepted international requirements including preparation of an ESIA, which would include an Environmental and Social Management Plan (ESMP) for managing all significant project related impacts. These international requirements are mainly based on World Bank Group Safeguard Policies. For the private sector financing, IFC Environmental Health and Safety Guidelines and IFC Performance Standards on Social and Environmental Sustainability have become the most important of these international requirements. In addition, Export Credit Agencies (ECAs) follow the World Bank Policies under the umbrella of the Organization for Economic Co-operation and Development (OECD)

recommendations. The IFC requirements and guidelines and ECA requirements are summarized below.

1.3.2 IFC Environmental Health and Safety Guidelines

IFC has been preparing comprehensive guidance documents about environmental health and safety. These documents include General Environmental, Health and Safety Guidelines and Sector-specific Environmental Health and Safety Guidelines. These guidelines include administrative and technical requirements and best practices for projects' environmental performance, occupational health and safety, community health and safety, etc. for all phases of the project (construction, operation and decommissioning). The sector-specific guidelines of IFC have been prepared for addressing the specific needs of the main sectors in which IFC works. In these guidelines, environment, health and safety issues are included and discussed with regard to the specific needs of various sectors. These guidelines are to be used together with the General Environmental, Health and Safety Principles.

IFC Performance Standards on Social and Environmental Sustainability

IFC applies the Performance Standards (PS) to manage social and environmental risks and impacts and to enhance development opportunities in its private sector financing. The Performance Standards may also be applied by other financial institutions electing to apply them to projects in emerging markets.

The following eight Performance Standards establish the requirements that the project owner is required to meet throughout the life of an investment supported by IFC or other relevant financial institution using these standards:

PS 1 Assessment and Management of Environmental and Social Risks and Impacts

PS 2 Labour and Working Conditions

PS 3 Resource Efficiency and Pollution Prevention

PS 4 Community Health, Safety and Security

PS 5 Land Acquisition and Involuntary Resettlement

PS 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

PS 7 Indigenous Peoples

PS 8 Cultural Heritage.

Export Credit Agencies (ECAs) and EBRD

ECAs use screening processes to categorize credit applications according to their potential negative impacts, the standards, practices and processes that the parties involved in the project intend to apply, and the results of any public consultations on the project with relevant stakeholders.

According to the Revised Council Recommendation on Common Approaches on the Environment and Officially Supported Export Credits (The "Common Approaches") of OECD, projects have been benchmarked against host country standards and either against the relevant aspects of World Bank Safeguard Policies or, where appropriate, to IFC Performance Standards, or standards of Regional Development Banks (such as EBRD which this report will take into account together with IFC PS's while conducting the Gap Analysis), or any relevant internationally recognized standards (such as European Union standards). Based on the categorization of the projects, ESIA studies can be required in line

with, mainly, the World Bank standards and policies. Although OECD published the "Common Approaches" document, the details of these requirements might show some differences among different ECAs.

EBRD financed projects are expected to meet good international practice related to sustainable development. To help clients and /or their projects achieve this, the EBRD has established the following Performance Requirements (PRs) that the clients are expected to meet in a time frame acceptable to the Bank:

PR 1 Environmental and Social Appraisal and Management

PR 2 Labour and Working Conditions

PR 3 Pollution Prevention and Abatement

PR 4 Community Health, Safety and Security

PR 5 Land Acquisition, Involuntary Resettlement and Economic Displacement

PR 6 Biodiversity Conservation and Sustainable Natural Resource Management

PR 7 Indigenous Peoples

PR 8 Cultural Heritage

PR 9 Financial Intermediaries

PR 10 Information Disclosure and Stakeholder Engagement

1.3.3 National Legal Framework

The Turkish legal framework for the protection of environment, cultural heritage and wildlife and nature and the institutional framework are described in the following sections.

1.3.3.1 Institutional Framework

The Ministry of Environment and Urbanisation (MoEU) is the responsible organization for the implementation of policies adopted for protection and conservation of the environment, and for sustainable development and management of natural resources.

The Ministry of Environment and Forestry was first established as an Under-Secretariat of the Prime Minister's office in 1987 and was promoted to the rank of Ministry of Environment in August 1991 by the Establishment Law No. 443. Then, the Ministry of Environment and Forestry was established in 2003 through a merger of the previously separate Ministry of Environment and Ministry of Forestry. In 2011, the environment part of the Ministry of Environment and Forestry was separated and merged with the Ministry of Public Works and Settlement to form the MoEU.

The MoEU is based in Ankara and supported by provincial organizations. The MoEU has an overall coordinating role for the development and implementation of environmental policies in Turkey, including the introduction process for the EU environmental requirements. The MoEU is composed of the following directorates and departments:

- General Directorate of Spatial Planning
- General Directorate of Environmental Management
- General Directorate of Environmental Impact Assessment, Permits and Auditing
- General Directorate of Construction Affairs
- General Directorate of Infrastructure Services

- General Directorate of Occupational Services
- General Directorate of Geographic Information Systems
- General Directorate for the Conservation of Natural Heritage
- Directorate of Counselling and Inspection
- Directorate of Strategy Development
- Head of Higher Science Board
- Legal Consultancy Department
- Directorate of Foreign Relations
- Directorate of EU Investments
- Directorate of Training and Publications
- Directorate of Personnel Office
- Directorate of Supporting Services
- Press and Public Relations Consultancy Department
- Private Secretariat

1.3.3.2 Turkish Legislation

Turkish environmental legislation has been developed in line with national and international legislation and standards. In recent years, some of the regulations have been harmonized with EU Directives in the scope of pre-accession efforts of Turkey. The following subsections describe the legislation and procedures that may be applicable to the environmental and social aspects of the Istanbul Third Airport Project.

The Environmental Law (Law No: 2872) of Turkey, which came into force in 1983, addresses environmental issues within a very broad scope. In accordance with the Turkish Constitution and the principles of Environmental Law, the state and the citizens bear responsibility for the protection of the environment. Other laws, which are complementary to the Environmental Law, govern the protection and conservation of the environment and prevention and control of pollution by implementing appropriate measures. Key relevant environmental and social laws are listed below:

- Coastal Law (Law No: 3621 , Date of Ratification: 1990)
- Conservation of Cultural and Natural Assets Law (Law No: 2863 , Date of Ratification: 1983)
- Energy Efficiency Law (Law No: 5627 , Date of Ratification: 2007)
- Forestry Law (Law No: 6831 , Date of Ratification: 1956)
- Groundwater Law (Law No: 167 , Date of Ratification: 1960)
- Labour Law (Law No: 4857 , Date of Ratification: 2003)
- Law for the Encouragement of Tourism (Law No: 2634 , Date of Ratification: 1982)
- Law on Principles of Emergency Response and Indemnification of Losses in case of Pollution of the Sea Surrounding due to Petroleum and Other Hazardous Substances (Law No: 5312, Date of Ratification: 2005)
- Municipality Law (Law No: 5393 , Date of Ratification: 2005)
- National Parks Law (Law No: 2873 , Date of Ratification: 1983)
- Pastures Law (Law No: 4342 , Date of Ratification: 1998)

- Preservation by Renovation and Utilization by Revitalizing of Deteriorated Immovable Historical and Cultural Properties Law (Law No: 5366, Date of Ratification: 2005)
- Public Health Law (Law No: 1593, Date of Ratification: 1930)
- Physical Development Planning Law (Law No: 3194, Date of Ratification: 1985
- Use of Renewable Energy Sources for Production of Electrical Energy Law (Law No: 5346, Date of Ratification: 2005)
- Water Products Law (Law No: 1380, Date of Ratification: 1971)

In line with the Environmental Law and other supplementary laws, several relevant regulations, communiqués and ordinances have been published since 1983 which include:

Air Quality Control and Management

- Regulation on the Control of Air Pollution Caused by Heating, Official Gazette date: January 13, 2005, No: 25699.
- Regulation on the Control of Exhaust Emissions, Official Gazette date: April 4, 2009, No: 27190.
- Regulation on Air Pollution Control Sourced from Industry, Official Gazette date: July 3, 2009, No: 27277.
- Regulation on Assessment and Management of Air Quality, Official Gazette date: June 6, 2008, No: 26898.

Environmental Management, Permitting and Planning

- Environmental Auditing Regulation, Official Gazette date: November 21, 2008 and No: 27061.
- Environmental Impact Assessment Regulation, Official Gazette date: July 17, 2008 and No: 26939.
- Regulation Concerning Environmental Land use Plans, Official Gazette date: November 11, 2008 and No: 27051.
- Regulation on Permits and Licenses that are to be obtained in accordance with the Environmental Law, Official Gazette date: April 29, 2009, No: 27214.
- Regulation for Starting up and Operating a Work Place, Official Gazette date: August 10, 2005, No: 25902.

Health and Safety

- Communiqué on Hazard Classes List related to Occupational Health and Safety, Official Gazette date: November 25, 2009, No: 27417.
- First Aid Regulation, Official Gazette date: May 22, 2002, No: 24762.
- Heavy and Hazardous Works Regulation, Official Gazette date: June 16, 2004, No: 25494.
- Health and Safety Signs Regulation, Official Gazette date: December 23, 2003, No: 25325 (based on EU Council Directive 92/58/EEC dated June 24, 1992).
- Ordinance on Occupational Health and Safety, Official Gazette date: January 11, 1974, No: 14765 (Cabinet Decision Date: December 4, 1973, Decision No: 7/7583).

- Ordinance on Precautions Required in Workplaces Working with Flammable, Explosive, Dangerous, and Harmful Substances, Official Gazette date: December 24, 1973, No: 14752.
- Regulation Concerning Operation Certificate, Official Gazette date: December 4, 2009, No: 27422.
- Regulation Concerning the Use of Personal Protection Equipment at Workplaces, Official Gazette date: February 11, 2004, No: 25370 (based on EU Council Directive 89/656/EEC dated November 11, 1989).
- Regulation on Health and Safety in Fixed Term and Temporary Employment, of May, 2004 (based on EU Council Directive 91/383/EEC dated June 25, 1991)
- Regulation on Health and Safety Measures in the Use of Work Equipment, Official Gazette date: February 11, 2004, No: 25370.
- Regulation on Health and Safety Measures to be taken at Works Involving Chemicals, Official Gazette date: December 26, 2003, No: 25328.
- Regulation on Methods and Essentials of Work Health and Safety Training for Workers, Official Gazette date: April 7, 2004, No: 25426.
- Regulation on Occupational Health and Safety, Official Gazette date: December 9, 2003, No: 25311) (based on EU Council Directive 89/391/EEC dated June 6, 1989)
- Regulation on the Protection of Buildings from Fire, Official Gazette date: December 19, 2007, No: 26735.
- Regulation on Protecting Workers from Hazards of Explosive Environments, Official Gazette date: December 26, 2003, No: 25328.
- Regulation on Radiation Safety, Official Gazette date: March 24, 2000, No: 23999.

Management of Chemicals and Other Dangerous Substances

- Regulation Concerning the Classification, Packaging, and Labeling of Dangerous Substances and Preparations, Official Gazette date: December 26, 2008, No: 27092, repeated.
- •Regulation Concerning the Preparation and Distribution of Material Safety Data Sheets for the Dangerous Substances and Preparations, Official Gazette date: December 26, 2008, No: 27092 (repeated).
- Regulation on the Inventory and Control of Chemicals, Official Gazette date: December 26, 2008, No: 27092 (repeated).

Nature Protection

- Regulation on Pastureland, Official Gazette date: July 31, 1998, No: 23419.
- Regulation on the Protection of Wetlands, Official Gazette date: May 17, 2005, No: 25818.
- Regulation on Procedures and Principles Concerning the Protection of Game and Wild Animals and their Habitats and Combat with their Pests, Official Gazette date: October 24, 2005, No: 25976.

Noise Control and Management

- Noise Regulation, Official Gazette date: December 23, 2003, No: 25325.

- Regulation on the Assessment and Management of Environmental Noise, Official Gazette date: June 4, 2010, No: 27601.
- Regulation on the Environmental Noise Emission caused by Equipment used Outdoors, Official Gazette date: December 30, 2006, No: 26392 (4th repeated).
- Vibration Regulation, Official Gazette date: December 23, 2003, No: 25325.

Soil Quality Control and Management

- Implementation Regulation on Soil Protection and Land Use, Official Gazette date: December 15, 2005, No: 26024.
- Regulation on the Control of Soil Pollution and Polluted Areas by Point Sources, Official Gazette date: June 8, 2010, No: 27605.
- Regulation on the Application of Domestic and Urban Treatment Sludge on Soils, Official Gazette date: August 3, 2010, No: 27661.

Waste Management

- Hazardous Waste Control Regulation, Official Gazette date: March 14, 2005, No: 25755.
- Regulation Concerning the General Principles of Waste Management, Official Gazette date: July 5, 2008, No: 26927.
- Regulation Concerning the Landfill of Wastes, Official Gazette date: March 26, 2010, No: 27533.
- Regulation Concerning the Incineration of Wastes, Official Gazette date: October 6, 2010, No: 27721.
- Regulation on the Control of Excavation Materials, Construction and Demolition Wastes, Official Gazette date: March 18, 2004, No: 25406.
- Regulation on the Control of Medical Wastes, Official Gazette date: July 22, 2005, No: 25883.
- Regulation on the Control of Packaging Wastes, Official Gazette date: August 24, 2011, No: 28035.
- Regulation on the Reception and Control of Wastes from Ships, Official Gazette date: December 26, 2004, No: 25682.
- Regulation on the Control of Waste Batteries and Accumulators, Official Gazette date: August 31, 2004, No: 25569.
- Regulation on the Control of Waste Oils, Official Gazette date: July 30, 2008, No: 26952.
- Regulation on the Control of Waste Tires, Official Gazette date: November 25, 2006, No: 26357.
- Regulation on the Control of Waste Vegetable Oils, Official Gazette date: April 19, 2005, No: 25791.
- Solid Wastes Control Regulation, Official Gazette date: March 14, 1991, No: 20814.

Water Quality Control and Management

- Ordinance on Groundwater Resources, Official Gazette date: August 8, 1961, No: 10875.

- Regulation Concerning Water for Human Consumption, Official Gazette date: February 17, 2005, No: 25730.
- Regulation on the Control of Pollution Caused by Dangerous Substances in Water Environment, Official Gazette date: November 26, 2005, No: 26005.
- Regulation on Pit Opening Where Sewer System Construction is not Applicable, Official Gazette date: March 19, 1971, No: 13783.
- Water Pollution Control Regulation, Official Gazette date: December 31, 2004, No: 25687.

1.4 Land Acquisition and Resettlement

In the Turkish Constitution, under the heading “Social and Economic Rights and Responsibilities”, Article 46 deals with expropriation issues. The article states that whenever expropriation is required to serve public interests (regarding the regional requirements of projects related with the development issue), the government and governmental organizations are authorized to initiate and execute the process. Except under conditions specified by the expropriation law, expropriation payments are made in cash and in advance.

Regarding the expropriation process, the article does not point out any principles other than the basic statement mentioned above, and it refers to currently relevant laws in force, which are mainly “Expropriation Law” and “Resettlement Law”.

In Turkey, there are no constitutional principles for resettlement applications. However, articles 44 and 45 of the Constitution are indirectly related with the resettlement activities. Article 44 deals with land possession and stipulates the role of the government regarding the protection of “landless” farmers, whereas article 45 sets forth the responsibilities of the government to support agricultural and stockbreeding activities. In addition, article 56 states that all the people have the right to live in a healthy environment.

The Construction and Real Estate Department of the General Directorate of State Airports Authority (DHMI) has the responsibility and organizational arrangements for the acquisition of an immovable properties required by its development projects by the following means;

- Through temporary occupancy,
- Through establishment of easement right on assets,
- Through donations,
- Through purchases,
- Through barter.

The process entails the following: project approval; preparation of expropriation plans; identification of the property landowners and address investigation; expropriation decision; establishment of valuation commission and valuation process; establishment of negotiation commission and purchasing process.

Turkish expropriation works are mainly regulated with the “Expropriation Law”. This law includes procedures for processes to be undertaken during expropriation and establishment of easement rights, valuation of assets and resources, re-purchase of unused properties, the turnover process between institutions, relevant rights and responsibilities, and conflict resolution procedures. In accordance with the law, the Project Sponsor Organisation (PSO), DHMI in this case, is responsible for the execution of expropriation works.

According to the Expropriation Law, the PSO, has to prepare (or get prepared by a subcontractor) expropriation maps, which show the boundaries, surface area and kind of immovable assets and resources to be expropriated. In the next step, the owners of the properties and occupants (if there is no title-deed registration) and their addresses are ascertained by using title-deed, tax and state registers and/or external research and documents.

According to the Expropriation Law, for the acquisition of private assets (lands, buildings etc.,) internal valuation and negotiation commissions shall be established at the PSO. The valuation commission(s), which is composed of at least three experts, determines the unit and maximum value of assets at the expropriation area. For this reason, the commission may use reports of specialists/relevant organizations and/or information gathered from the Industry and Trade Chambers, as well as local real estate agencies.

During the valuation process, the Commission considers the following valuation criteria:

- The nature of the land or building;
- The size of the land or building;
- All the characteristics and elements, which could affect the value of the land or building, including the separate value of those elements;
- Any taxes paid on the land or building;
- Previous amounts awarded in compensation for expropriation;
- The net income that could be obtained from the assets and/or resources, (without undertaking any changes, using the property with the same condition as it was at the expropriation date). For house plots, the amount for which similar house plots have been sold, without any change in the use to which it is put, prior to the date of expropriation;
- For buildings, official unit prices (from MEU) at the expropriation date, estimates of the cost of rebuilding and depreciation for wear and tear; and
- Any other objective factors that could affect the valuations.

After the valuation process, negotiation commission(s) is/are established within the PSO, consisting of least three members, to execute the purchasing and bartering processes. The commission(s) sends an official letter to each property owner and in the case where the owner appeals to PSO within 15 days with a request for selling/bartering his/her property, the commission starts the negotiating sessions to agree upon a value/barter. Once the value is fixed, and the expropriation agreement is signed, the exit from land and payment shall take place within 45 days. The owner does not hold the right of action for the expropriation and/or expropriation value after signing the agreement.

2 Gap Analysis Procedure

The gap analysis includes three stages:

- The reconnaissance site visit which was undertaken between 15th - 16th of September, 2013;
- Review of Available Documents and Reports over a two week period, and
- Preparation of the Gap Analysis report.

2.1 Site Survey

The site survey included familiarization with the development area and taking photographs of the Project Area and its vicinity which provided an overview to the Project Site status.

2.2 Review of Available Documents and Reports

A project documentation review has been conducted on the available reports and maps to evaluate the existing information relevant to the Project in relation to international environmental and social requirements. Thus, the adequacy and sufficiency of this information has been checked to evaluate conformance with international requirements. This review covered, but was not limited to, the following:

- Existing reports (previous audit reports, EIA report, feasibility and design reports, etc.) for the proposed project.

2.3 Conducting the Gap Analysis

The Gap Analysis covered a comparison of the current EIA Report (May 2013) and the requirements of the international finance institutions. As a result of this comparison, appropriate approaches for closing the identified gaps have been proposed in order for the Project to meet international requirements.

The overall aims of the EIA Gap Analysis can be summarized as follows:

- Identify the gaps to meet Turkish EIA requirements
- Identify the gaps to meet international criteria and standards;
- Identify practices for compliance with international criteria;
- Identify strategies and actions to fill the identified gaps

3 Environmental and Social Gap Analysis

The environmental and social gap analysis for the Istanbul Third Airport Project has been conducted with a thorough comparison of the Final EIA Report (approved in May 2013 by MoEU) against Turkish EIA requirements, IFC performance standards (PSs) and EBRD performance requirements (PRs).

In this context, Table 3.1 presents the results of the gap analysis in tabular format. Actions required to be taken to bridge the gaps identified and parties responsible for the implementation of these actions are summarized in this table.

As can be seen in Table 3.1, all the IFC performance standards and EBRD performance requirements have been evaluated for their applicability to the Istanbul Third Airport Project.

In conclusion, it should be noted that, although the Final EIA Report has been accepted by the Turkish MoEU, there are a number of gaps that will need to be addressed in order for it to meet the international requirements. While the Turkish EIA process itself does not fully match international standards for implementation in terms of a lack of guidance on impact assessment methodologies in Turkey and the lack of assessment criteria for reviewing EIAs, there are also omissions that would have fulfilled international requirements. These include missing analysis and documentation on alternative project sites; missing assessments and evaluations regarding baseline data and potential impacts on flora & fauna; air quality; visual impact; earthworks; noise and vibration; and contaminated land. These omissions are discussed further in the following table.

The actions are colour coded to allow priorities to be better understood:

Red – immediate;

Amber – medium term, and

Blue – longer term.

Table 3.1. Gaps Between International Requirements and Final EIA Report dated May, 2013

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
1.1. Environmental and Social Assessment and Management System (ESMS)			
The project owner, in coordination with other responsible government agencies and third parties, as appropriate, will conduct a process of environmental and social assessment, and establish and maintain an ESMS appropriate to the nature and scale of the project and commensurate with the level of its environmental and social risks and impacts. The ESMS will incorporate the following elements: (i) policy; (ii) identification of risks and impacts; (iii) management programs; (iv) organizational capacity and competency; (v) emergency preparedness and response; (vi) stakeholder engagement; and (vii) monitoring and review.	Environmental risks and impacts of the Project are identified to some extent. However, the range of potential environmental and social impacts has not been identified, for example, there is no social assessment, or assessment of landscape and visual impacts, forestry and in many cases operation of the airport has been omitted in assessing impacts. The EIA does not discuss cumulative impacts. No ESMS has been prepared as part of the EIA.	Conduct a complete assessment of potential environment and social impacts associated with both airport construction and operation (some of these gaps/actions are further discussed under specific sections of this analysis). Complete an assessment of potential cumulative impacts. Establish a Project ESMS that describes mitigation and performance improvement measures and actions that address the identified environmental and social risks and impacts of the Project. Where the identified risks and impacts cannot be avoided, the client should identify mitigation and performance measures and establish corresponding actions to ensure the project will be operated in compliance with applicable laws and regulations, and meet the requirements of Performance Standards 1 through 8.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
1.2. Environmental and Social Action Plan (ESAP)			
The management programs will establish environmental and social Action Plans, which will define desired outcomes and actions to address the issues raised in the risks and impacts identification process, as measurable events to the extent possible, with elements such as performance indicators, targets, or acceptance criteria that can be tracked over defined time periods, and with estimates of the resources and responsibilities for implementation. As appropriate, the management program will recognize and incorporate the role of relevant actions and events controlled by third parties to address identified risks and impacts. Recognizing the dynamic nature of the project, the management program will be responsive to changes in circumstances, unforeseen events, and the results of monitoring and review. Action plans may include an overall Environmental and Social Action Plan necessary for carrying out a suite of mitigation measures or thematic action plans, such as Resettlement Action Plans or Biodiversity Action Plans. Action plans may be plans designed to fill in the gaps of existing management programs to ensure consistency with the Performance Standards, or they may be stand-alone plans that specify the project's mitigation strategy. The "Action plan" terminology is understood by some communities of practice to mean Management plans, or Development plans. In this case, examples are numerous and include various types of environmental and social management plans.	No ESAP has been created.	Prepare an ESAP that reflects the improvements and actions necessary to ensure that the project meets international standards during both construction and operation at each phase.	Project Developer
1.3. Organizational Capacity and Competency			

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
Where the project involves specifically identified physical elements, aspects and facilities that are likely to generate impacts, the ESMS will establish and maintain an emergency preparedness and response system so that the client, in collaboration with appropriate and relevant third parties, will be prepared to respond to accidental and emergency situations associated with the project in a manner appropriate to prevent and mitigate any harm to people and/or the environment.	Organisational arrangements and the competency of construction personnel have not been incorporated into the EIA.	Define project environment and social resources (construction, consortium and operational) in terms of organisation and competency with regard to environment and social issues.	Project Developer
1.4. Emergency Preparedness and Response			
Where the project involves specifically identified physical elements, aspects and facilities that are likely to generate impacts, the ESMS will establish and maintain an emergency preparedness and response system so that the client, in collaboration with appropriate and relevant third parties, will be prepared to respond to accidental and emergency situations associated with the project in a manner appropriate to prevent and mitigate any harm to people and/or the environment. This preparation will include the identification of areas where accidents and emergency situations may occur, communities and individuals that may be impacted, response procedures, provision of equipment and resources, designation of responsibilities, communication, including that with potentially Affected Communities and periodic training to ensure effective response. The emergency preparedness and response activities will be periodically reviewed and revised, as necessary, to reflect changing conditions.	No emergency scenarios, including response mechanisms, have been identified within the EIA.	Prepare and implement an emergency response plan for both construction and operational phases.	Project Developer
1.5. Monitoring and Review			

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
The project owner should establish procedures to monitor and measure the effectiveness of the management program, as well as compliance with any related legal and/or contractual obligations and regulatory requirements. Where the government or other third party has responsibility for managing specific risks and impacts and associated mitigation measures, the client will collaborate in establishing and monitoring such mitigation measures. Where appropriate, clients will consider involving representatives from Affected Communities to participate in monitoring activities. The client's monitoring program should be overseen by the appropriate level in the organization. For projects with significant impacts, the client will retain external experts to verify its monitoring information. The extent of monitoring should be commensurate with the project's environmental and social risks and impacts and with compliance requirements.	The EIA does not include an environment and social management plan, therefore it has not established a programme and procedures for monitoring activities and potential impacts to defined receptors. However, there is a monitoring plan specifying whether the environmental impacts of the project (for air, water quality, noise and vibration) will be in consistent with the Turkish Environment Law and related regulations.	Once adequate baseline data has been captured and potential environmental and social impacts have been assessed for both construction and operational phases, a monitoring plan should be established to capture data to confirm that the project mitigation plans are delivering the desired results and that no unforeseen impacts are occurring.	Project Developer
1.6. Stakeholder Engagement (PS 1 and PR 10)			
Stakeholder engagement is the basis for building strong, constructive, and responsive relationships that are essential for the successful management of a project's environmental and social impacts. Stakeholder engagement is an on-going process that may involve, in varying degrees, the following elements: stakeholder analysis and planning, disclosure and dissemination of information, consultation and participation, grievance mechanism, and on-going reporting to Affected Communities. The nature, frequency, and level of effort of stakeholder engagement may vary considerably and will be	The EIA reports that a single, formal, information disclosure exercise has been carried out regarding the project. This occurred at the start of the EIA process. No further information disclosure activities have been undertaken prior to the EIA report being finalized.	A stakeholder engagement plan should be prepared to address project start up, construction and operation. This should be a two way process of giving and receiving information. It should involve the local, regional and national communities as applicable to the project.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
commensurate with the project's risks and adverse impacts, and the project's phase of development.	The EIA does not describe any stakeholder engagement and therefore it is assumed that none has been undertaken.		
1.7. External Communications and Grievance Mechanisms			
The project owner should implement and maintain a procedure for external communications that includes methods to (i) receive and register external communications from the public; (ii) screen and assess the issues raised and determine how to address them; (iii) provide, track, and document responses, if any; and (iv) adjust the management program, as appropriate. In addition, clients are encouraged to make publicly available periodic reports on their environmental and social sustainability. Where there are Affected Communities, the client will establish a grievance mechanism to receive and facilitate resolution of Affected Communities' concerns and grievances about the client's environmental and social performance. The grievance mechanism should be scaled to the risks and adverse impacts of the project and have Affected Communities as its primary user. It should seek to resolve concerns promptly, using an understandable and transparent consultative process that is culturally appropriate and readily accessible, and at no cost and without retribution to the party that originated the issue or concern. The mechanism should not impede access to judicial or administrative remedies. The client will inform the Affected Communities about the mechanism in the course of the stakeholder engagement process.	The EIA does not address external and internal communication, consultation or stakeholder engagement. Therefore, no procedures have been proposed for provision of information or receiving comments and grievances regarding the project plans.	A communications plan and procedure (including identification of Affected Communities) should be prepared that describe mechanisms for external communications on environment and social topics. The plan should define how grievances and concerns can be made to the project and how these will be investigated, responded to and rectified, if appropriate.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
1.8. On-going Reporting to Affected Communities			
The project owner should provide periodic reports to the Affected Communities that describe progress with implementation of the project Action Plans on issues that involve on-going risk to or impacts on Affected Communities and on issues that the consultation process or grievance mechanism have identified as a concern to those Communities. If the management program results in material changes in or additions to the mitigation measures or actions described in the Action Plans on issues of concern to the Affected Communities, the updated relevant mitigation measures or actions will be communicated to them. The frequency of these reports will be proportionate to the concerns of Affected Communities but not less than annually.	The EIA does not define Affected Communities (see above) and therefore there is no definition of communication and reporting.	Reporting to Affected Communities should be included within the Communication Plan and Procedure.	Project Developer
2. LABOR AND WORKING CONDITIONS (PS 2, PR 2 AND PR 10)			
2.1. Human Resources Policy			
The project owner should adopt and implement human resources policies and procedures appropriate to its size and workforce that set out its approach to managing workers consistent with the requirements of this Performance Standard and national law. # The client will provide workers with documented information that is clear and understandable, regarding their rights under national labour and employment law and any applicable collective agreements, including their rights related to hours of work, wages, overtime, compensation, and benefits upon	There is no Human Resources (HR) Policy for the project.	Prepare a Human Resources Policy.	

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
beginning the working relationship and when any material changes occur.			
2.2. Working Conditions and Terms of Employment			
The project owner should establish a mechanism to maintain, and improve the worker-management relationship and should also promote compliance with national employment and labour laws.	There are warnings about how the workers should prevent any harmful effects that may arise during construction and operation phases. However, detailed working conditions or terms of employment are not mentioned in the EIA report.	Prepare a project handbook that covers working conditions and employment arrangements.	
2.3. Vulnerable Workers such as Child Labour, Forced Labour, Non-Discrimination and Equal Opportunity			
The project owner should establish a mechanism to protect workers, including vulnerable categories of workers such as children, migrant workers, forced labour, workers engaged by third parties, and workers in the client's supply chain while it should also provide a tool to promote safe and healthy working conditions, and the health of workers.	The EIA does not address worker employment and therefore, there is no documented or formal policy of non-discrimination, equal opportunity and fair treatment in the EIA.	Prepare an Equality and Diversity Programme that defines protection of employees, contractors and suppliers.	
2.4. Worker's Organizations			
In countries where national law recognizes workers' rights to form and to join workers' organizations of their choosing without interference and to bargain collectively, the client will comply with national law. Where national law substantially restricts workers' organizations, the client will not restrict	The EIA does not address worker employment.	See item 2.2 above for action.	

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
workers from developing alternative mechanisms to express their grievances and protect their rights regarding working conditions and terms of employment. The client should not seek to influence or control these mechanisms. In either case described in previous paragraph of this Performance Standard, and where national law is silent, the client will not discourage workers from electing worker representatives, forming or joining workers' organizations of their choosing, or from bargaining collectively, and will not discriminate or retaliate against workers who participate, or seek to participate, in such organizations and collective bargaining. The client will engage with such workers' representatives and workers' organizations, and provide them with information needed for meaningful negotiation in a timely manner. Workers' organizations are expected to fairly represent the workers in the workforce.			
2.5. Grievance Mechanism			
The client will provide a grievance mechanism for workers (and their organizations, where they exist) to raise workplace concerns. The client will inform the workers of the grievance mechanism at the time of recruitment and make it easily accessible to them. The mechanism should involve an appropriate level of management and address concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned, without any retribution. The mechanism should also allow for anonymous complaints to be raised and addressed. The mechanism should not impede access to other judicial or administrative remedies that might be available under the law or through	The EIA does not address worker employment.	See item 2.2 above for action.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
existing arbitration procedures, or substitute for grievance mechanisms provided through collective agreements.			
3. RESOURCE EFFICIENCY AND POLLUTION PREVENTION/ABATEMENT (PS 3 AND PR 3)			
3.1. Resource Efficiency			
The project owner should implement technically and financially feasible and cost effective measures for improving efficiency in its consumption of energy, water, as well as other resources and material inputs, with a focus on areas that are considered core business activities. Such measures will integrate the principles of cleaner production into product design and production processes with the objective of conserving raw materials, energy, and water. Where benchmarking data are available, the client will make a comparison to establish the relative level of efficiency.	The EIA does not address resource consumption and resource efficiency measures.	Prepare an evaluation of potential resource efficiency during construction and operation. Define potential impacts and develop approaches for avoidance, minimisation and use of alternative materials in order to reduce the project impact on natural and scarce resources.	Project Developer
3.2. Pollution Prevention and GHG emissions			
The project owner should avoid the release of pollutants or, when avoidance is not feasible, minimize and/or control the intensity and mass flow of their release. This applies to the release of pollutants to air (including GHG emissions), water, and land due to routine, non-routine, and accidental circumstances with the potential for local, regional, and transboundary impacts. Where historical pollution such as land or ground water contamination exists, the project should seek to determine whether it is responsible for mitigation measures. It is also important to address potential adverse project impacts on existing ambient conditions, the client will consider relevant factors, including, for example (i) existing ambient conditions;	Baseline information is provided in the EIA on air emissions, wastewater, solid wastes, hazardous wastes and noise. The EIA assessments have focussed on construction phases and have not addressed operational phases for each of these elements. With regard to air quality assessments have	Baseline information regarding potential environmental impacts is incomplete, therefore supplementary studies are required to establish the correct baseline conditions across the range of parameters. Baseline information must be captured for topics such as potential contaminated land and environmental impacts associated	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
(ii) the finite assimilative capacity of the environment; (iii) existing and future land use; (iv) the project's proximity to areas of importance to biodiversity; and (v) the potential for cumulative impacts with uncertain and/or irreversible consequences. In addition to applying resource efficiency and pollution control measures as required in this Performance Standard, when the project has the potential to constitute a significant source of emissions in an already degraded area, the project should consider additional strategies and adopt measures that avoid or reduce negative effects. These strategies include, but are not limited to, evaluation of project location alternatives and emissions offsets.	only been undertaken for PM_{10} and no other potential pollutants and noise impacts were only considered during construction activities not during operation. The EIA provides no information regarding the potential contamination of land associated with historical use and does not discuss the environmental and social impacts associated with the volumes of soil movements proposed in the earthworks activities.	with the soil movement required by the earthworks. All assessments should address current conditions and potential future impacts of project construction and operation.	
4. COMMUNITY HEALTH, SAFETY AND SECURITY (PS 4 AND PR 4)			
The project should anticipate and avoid adverse impacts on the health and safety of the Affected Community and ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks to the Affected Communities.	The EIA does not address safety and security issues and there is no discussion regarding the environmental and social impacts associated with construction camps and the influx of temporary/migrant labour to support construction activities.	Assess the safety and security risks associated with construction and operation of the airport on the community and develop a plan to mitigate and manage risks.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
	The EIA does not address community health, safety and security associated with airport operations.		
5. LAND ACQUISITION, INVOLUNTARY RESETTLEMENT AND ECONOMIC DISPLACEMENT (PS 5 AND PR 5)			
Unless properly managed, involuntary resettlement may result in long-term hardship and impoverishment for the affected Communities and persons, as well as environmental damage and adverse socio economic impacts in areas to which they have been displaced. For these reasons, involuntary resettlement should be avoided. However, where involuntary resettlement is unavoidable it should be minimised and appropriate measures to mitigate adverse impacts on displaced persons and host communities should be carefully planned and implemented. The Government often plays a central role on the land acquisition and resettlement process, including determination of compensation, and is therefore an important third party in many situations. The Project should anticipate land acquisition processes and where possible the client should get involved in the resettlement activities. Clients should consider using negotiated settlements.	The EIA discusses the land acquisition process in Turkey and but there is no discussion regarding Affected Persons and resettlement activities and impacts.	The developer is not responsible for the acquisition of land, however, it should engage with the Government to understand the acquisition process and the plans for resettlement. If the Government does not have an acquisition and resettlement action plan (RAP) then one should be prepared and implemented in conjunction with the external communication and stakeholder engagement plans It should be noted that there is a high risk that the project will struggle to gain international financing if the land acquisition process is regarded as non-compliant against international financing requirements and it will be impossible to retrospectively address the international requirements.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
6. BIODIVERSITY CONSERVATION AND SUSTAINABLE MANAGEMENT OF LIVING NATURAL RESOURCES (PS 6 AND PR 6)			
The project should consider how to protect and conserve biodiversity and the sustainable management of living natural resources.	The EIA has provided inadequate baseline data regarding project biodiversity and natural habitats and the potential impacts associated with the project during construction and operation. The EIA reports that a site vegetation survey was undertaken in October 2012. No other project site surveys are reported as having been undertaken. The EIA reports that ecological species and habitat evaluations were undertaken through habitat evaluation and literature review. The Project site is in a partially undeveloped location with benefit of forestry and scrub landscape, furthermore the project site contains a number of natural and man made water bodies and	Robust sampling methodologies and plans should be prepared to inform surveys for all identified habitats and species to ensure that robust baseline data is obtained to inform the assessment of potential impacts, mitigation and compensation strategies.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
	borders the Black Sea to the north. The Project site is located within the migratory route for birds migrating between the European and Asian continents. Robust sampling exercises have not been described and conducted to confirm baseline ecological value and allow analysis of potential impacts associated with project construction and operation.		
7. INDIGENOUS PEOPLES (PS 7 AND PR 7)			
Performance Standard 7 recognizes that Indigenous Peoples, as social groups with identities that are distinct from mainstream groups in national societies, are often among the most marginalized and vulnerable segments of the population. In many cases, their economic, social, and legal status limits their capacity to defend their rights to, and interests in, lands and natural and cultural resources, and may restrict their ability to participate in and benefit from development. Indigenous Peoples are particularly vulnerable if their lands and resources are transformed, encroached upon, or significantly degraded. Their languages, cultures, religions, spiritual beliefs, and institutions may also come under threat. As a consequence, Indigenous Peoples may be more vulnerable to the adverse impacts associated with project development than non-indigenous communities. This vulnerability may include loss of	The EIA does not discuss indigenous peoples.	An assessment should be made of whether there are any indigenous peoples within the project area of influence and a statement produced to confirm presence or absence and if present to develop and appropriate management approach.	Project Developer

International Requirement			
IFC Performance Standards and EBRD Performance Requirements	**Project's Implementation Status (in line with Turkish EIS) and Key Difference**	**Actions to be Taken to Bridge the Gap**	**Responsible Parties for the Action**
identity, culture, and natural resource-based livelihoods, as well as exposure to impoverishment and diseases.			
8. CULTURAL HERITAGE (PS 8 AND PR 8)			
8.1. Chance Find Procedure			
An (accidental) chance find procedure has to be developed by the project including the planning and construction phases of the project.	The EIA does not discuss cultural heritage issues and therefore there is no proposed chance finds procedure.	Develop a chance finds procedure for Project construction and operation.	Project Developer
8.2. Adverse Impact on Cultural Heritage			
The project should consider the protection of cultural heritage from the adverse impacts of project activities and support its preservation.	The EIA does not discuss the conduct of a baseline study for the cultural heritage in and around the project area, nor does it discuss potential Project impacts on cultural heritage.	Conduct a baseline assessment to establish cultural heritage value of the project site.	Project Developer
9. Financial Intermediaries (PR9)			
Financial Intermediaries in receipt of lending from EBRD are required to apply the EBRD Environment and Social Policy (2008) requirements.	This element is not required in the EIA.	It is understood that this is not applicable to the project at this time.	Not applicable.

3.1 Conclusions

The EIA Gap Analysis has determined that the information presented in the May 2013 EIA is inadequate in terms of understanding (and responding to) the full spectrum of environmental and social issues associated with the project site. Additionally, the level of information presented within the EIA does not meet international standards for EIA and preparation of an ESIA. As a consequence further data collection is required to establish baseline information from which a meaningful determination of potential environmental and social impacts can be undertaken and appropriate mitigation and management strategies can be developed for Project construction and operation phases.

It should be noted that there is a high risk that the project will struggle to gain international financing if the land acquisition process is regarded as non-compliant against international financing requirements and it will be impossible to retrospectively address the international requirements.