

**EXECUTIVE SUMMARY**  
**Environmental and Social Impact**  
**Assessment**

**For**

**Updating and Modernizing Terminal**  
**Building 2 at**  
**Cairo International Airport**  
**Cairo Airport Company**

By

**MB Consultant**

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## **EXECUTIVE SUMMARY**

### **Background**

Egypt has recognized that economic development and the welfare of the Egyptian population are tied to the sound management of its national resources and rich environment.

Accordingly, it was essential to develop national environmental affairs management plan. A national environmental affairs management plan was developed in the year of 1991 to provide better management for environmental issues all over the country. The plan was crafted to develop an effective environmental legislation, and to create a national environmental agency capable of implementing the national plans and enforcing the application of legislation. As a result of this policy Environmental Affairs Law (law No.4/1994) was developed together with its Executive Regulations.

Like all developmental and industrial projects, the proposed project is required by law to take environmental factors into consideration in all phases of the project, in such a way that will keep unavoidable environmental degradation to a minimum.

This executive summary is aimed at presenting the main findings of the Environmental and Social Impact Assessment conducted for the new development at Cairo International Airport, namely Terminal Building 2 (TB2). The objective of the Environmental and Social Impact Assessment is to examine the socio-cultural, economic, physical, and biological impacts in the areas which may be affected by the proposed project. Through this examination an appropriate proposal of mitigation measures, construction, operation environmental management, and monitoring plans can be fully explored.

This executive summary outlines the environmental and social sensitivities, potentially significant impacts, and mitigation measures to be undertaken under the proposed project. The reader is referred to the main body of the EIA report for specific information or further details not presented in depth in this summary. In



particular, this report describes relevant baseline data for the existing social and environmental reality of the construction project.

The project is partly financed by the World Bank and as such will comply with World Bank guidelines relative to environmental and social safeguard policies, as well as Government of Egypt applicable laws and regulations.

### **Description and Motivation of the Proposed Project**

Cairo Airport Company (CAC) set out a strategic framework for the development of Cairo International Airport. The plan started with Terminal Building 3 (TB3) and the new runway (OSRR-23LL). Construction and functionality has been successfully completed. Cairo Airport Company (CAC) plans to renovate Terminal 2 to meet a forecast demand for air travel rising to 7.5 million passengers per year by 2025. Cairo Airport Company's preferred option for facilitating this predicated rise in demand is to undertake development based on an expansion of the existing terminal building facilities, together with an expansion of other terminal infrastructure and facilities.

The plan is to refurbish Terminal 2 at Cairo International Airport after the successful completion and operation of Terminal 3. Therefore, CAC requested that the design consultants NACO/ECG investigate and evaluate three scenarios for the renovation of Terminal 2. The scenarios had to be based on the client's intention to accommodate all Gulf State Airlines in TB2, having a total capacity of approximately 7.5 million annual passengers (high scenario forecast for 2025) and be designed for IATA service level B. Beyond the requested 2025 forecast of 7.5 MAP, the client asked the designer to develop a scenario with a maximum utilization of the boundary of Terminal Building 2.

### **Terminal Building Two (TB2)**



Currently, Cairo Airport consists of three terminals. Terminal Building 1 (TB1), which commenced operations in 1963, is used primarily by Egypt Air, most Arab, and several Eastern European and African airlines. Terminal Building 2 (TB2), which was established in 1986, serves western European airlines as well as some Arab and Asian carriers. Terminal Building 3 (TB3) was established in 2008.

The refurbishment of Terminal 2 is based on the client's intention to accommodate all Gulf State Airlines in TB2, to reach a total capacity of approximately 7.5 million annual passengers.

From the structural point of view, Terminal Building 2 (TB2) Renovation Program Project is a special project that is comprised of a diversity of different areas utilizing shapes and functions of different areas for both the existing structures and the proposed extensions. The project is aimed at identifying the practicality and possibility of applying the required modifications, demolition and refurbishment of the existing structural system for TB2. The appropriate structural system for the proposed extensions should satisfy the building's function, type, shape and fulfill the structural basic requirements of safety, stability and durability.

### **Relevant Policies, Legal and Institutional Aspects**

EIA for the proposed project must meet a number of policy and legal requirements. The EIA has complied with the executive regulations of Egyptian Environmental Law 4, 1994 and World Bank policies. The EIA has been carefully modified to remain consistent in adhering to laws and regulations during preparation and implementation of the project.

### **Applicable Egyptian Environmental Legislations**

The law requires that any new project should comply with all the relevant articles pertinent to environmental attributes, which could be impacted by project activities.

Law 4/1994 and its executive regulations set the overall framework for environmental protection in Egypt. According to this law, an environmental impact assessment (EIA) should be prepared with the application for the license of a project. The law divides the types of projects into three lists: A, B, and C list projects. The development project of TB2 at CIA is a C-list project, which is comparable to a “Category A” World Bank project. According to the EEAA Guidelines for Egyptian Environmental Impact Assessment, the EIA of the project is being submitted to the competent administrative authority, the Ministry of Civil Aviation.

There are a number of laws and regulations that address different environmental violations. The following summarizes laws and articles relevant to environmental issues:

Table (1) Guidelines and Safeguard Policies

<b>Environmental issues</b>	<b>Laws</b>
<b>Noise</b>	Article 42 of Law 4, and article 44 of its executive regulations on maximum allowable limits for sound intensity
<b>Air Quality</b>	Article 40 of Law 4 and article 42 of its executive regulations maximum allowable limits for the concentration of pollutants resulting from burning of fuels. Article 36 of Laws and article 37 of its executive regulations on maximum allowable limits for pollutants in exhaust gases Article 35 of Law 4 and article 34 of its executive regulations on maximum allowable limits for ambient air pollutants.
<b>Wastewater</b>	Law No. 93/1962 on standards for the discharge wastewater to the sewerage network and its Ministerial Decree 44/ 2000.
<b>Hazardous Material</b>	Article 32 of Law 4 on handling of hazardous materials.
<b>Waste Management</b>	Law No. 38/1967 amended by Law No. 31/1976, and Law 4 on public cleanliness and collection and disposal of solid Waste.

### **Applicable World Bank Policies**

#### ***World Bank Guidelines and Safeguard Policies***

The World Bank includes Environmental Impact Assessments as an integral part of the evaluations it performs before financing a proposed project. The World Bank's Operational Policy 4.01 (October 3, 1991 and its updates, 1999) provides guidance on the types of assessments that should be performed for different types of projects, and on the scope and content of those assessments. According to Operational Directive 4.01, airport projects require a full Environmental Assessment (EA).

World Bank Environmental Safeguard Policies provide 10 potential issues that may need to be considered in an EA, depending on the specific characteristics of each project. *Table (2)* summarizes the expected applicability of the potential Safeguard Policies to updating and modernizing TB2 Project. The Safeguard Policies identified as "applicable" are those which may be triggered and thus considered "Requiring Management".

No safeguard policies were triggered except for the Environmental Impact Assessment. *Table 3* shows potential World Bank environmental Safeguard Policies and Updating and modernizing TB2 project applicability. The table justifies the applicability or lack thereof for implementation of WB Safeguard Policies besides an EIA.

Table (2) *Potential World Bank Environmental Safeguard Policies*

No. Safeguard Policy	Policy Triggered?	Justification
1.Environmental Assessment	Yes	<p>This policy applies to all projects requiring a Category B Environmental Assessment Under OP 4.01.</p> <p>All environmental and Social aspects included in TB2 project are adequately examined.</p> <p>TB2 project is not likely to have significant potential (reverse) environmental risks &amp; impacts in its area of influence (impacts on the natural environment: air, noise, water &amp; land; human health &amp; safety; physical cultural resources; and trans-boundary and global environment concerns).</p>
2. Involuntary Resettlement	No	<p>No relocation or loss of shelters.</p> <p>No loss of assets or access to assets.</p> <p>No loss of income sources or means of livelihood.</p> <p>All activities related to the construction of TB2 will take place within on CAC land either on the site or on land directly adjacent to the site. (i.e. no land acquisition, not even temporarily, will result from the construction.</p>
3. Physical Cultural Resources	No	<ul style="list-style-type: none"> <li>Physical and cultural resources are adequately examined.</li> </ul> <p>The TB2 project is not likely to have any significant impact on physical cultural resources.</p>
4. Natural Habitats	No	<p>Natural Habitats are adequately addressed and examined.</p> <p>The TB2 project is not likely to have any significant impacts on natural habitats.</p>

No. Safeguard Policy	Policy Triggered?	Justification
5. Projects in Disputed Areas	No	<ul style="list-style-type: none"> <li>The project is not situated in a disputed area. Any component likely to be financed as part of the project is not situated in a disputed area.</li> </ul>
6. Forest	No	<ul style="list-style-type: none"> <li>No forest areas exist.</li> </ul>
7. Indigenous Peoples	No	<ul style="list-style-type: none"> <li>The project does not affect the indigenous peoples in the project area.</li> </ul>
8. Pest management	No	<ul style="list-style-type: none"> <li>Procurement of pesticides or pesticide application equipment is not envisaged.</li> <li>The project will not affect pest management in any way.</li> </ul>

In addition to Environmental Impact Assessment guidelines, the World Bank has established rules concerning air pollution and water pollution from airports (*Pollution Prevention and Abatement Handbook-Part III* (July 1998)). The guidelines were officially published in 1988; since then, several sets of revisions have been proposed, most recently on March 22, 1996. The 1988 and proposed 1996 guidelines for air and water pollution levels expected from the airport will be discussed on this report.

World Bank's *Pollution Prevention and Abatement Handbook-Part III* (July 1998) also provides us with principles of industrial pollution management, monitoring and air emission & effluent discharge requirements presented in the industry, including guidelines for airports.

The Public Consultation Process has been designed in accordance with World Bank Guidance for the Preparation of a Public Consultation and Disclosure Plan (January 1996);

The EIA report presents the full assessment of the environmental, social, health and safety impacts of updating and modernizing TB2. This Executive Summary presents a short resume of the findings of the EIA report. For further details, reference should be made to the full EIA report.

### **Main Environmental Impacts**

The EIA is expected to play an increasing role in ensuring that the project meets sustainability criteria throughout the development and operation of TB2. Identifying potential adverse environmental impacts, as well as enhancing potential environmental benefits will achieve this objective.

Identifiable environmental impacts are assessed according to a hierarchy of environmental management techniques. Where an adverse environmental effect cannot be avoided, the project has endeavored to minimize, remedy and/or mitigate the impact.

During construction phase all passenger will be transfers to TB1

### **Construction Phase**

#### **Noise and Air Pollution**

Potential impacts during the construction phase of the project will arise mainly from the powered mechanical equipment to be operated at the construction worksite. However, to reflect the fact that noise originating from a construction site will likely comprise of contributions from a number of different mechanical sources, in this assessment sound power levels are defined on the basis of construction site activities, e.g. site clearing, utility relocation, excavation etc

Three categories of construction noise sources have been defined based on the combination of the following activities:

- **Demolition and Site Clearance** - The noise generated from demolition / site clearance activities and related mechanical equipment (mainly portable air compressors, jackhammers, scraper and dump trucks).



- **Construction** - Individual pieces of construction equipment produce relatively high outdoor noise levels. Clusters of equipment at construction sites can produce a steady level of noise from early morning to the evening hours, sometimes for relatively long periods of time.
- **Construction Yards** - It is unknown at this stage where construction yards (if any) will be located. This will need to be confirmed by the contractor and included in Contractors Environmental Management Plan, should off site construction yard(s) be required.

Air quality impact arising from construction activities will be dust, measured as Total Suspended Particulates (TSP) or PM<sub>10</sub>. The short term, temporary impacts from modernization and construction generated dust is considered to generate mainly nuisance impacts only inside the airport domain. However, there is the potential that this nuisance can have significant troubling impacts in terms of irritation to the eyes and throat of passengers, visitors and employees that are entering or exiting TB2 during a large dust event brought on by a gust of wind, which is not uncommon in Egypt.

## **Traffic and Access Roads**

During the construction phase, there will be an expected increase in traffic with a variation in the normal traffic composition at the project sites, which might be a probable cause of congestion that may lead to delays and traffic accidents.

Given that TB2 extension will be constructed inside the existing TB2 parking lot and since the limit of construction activities will encroach into the existing landside roads leading to the terminal's curbside, two main impacts are noted during the construction phase:

- Disturbance of vehicle movements to and from the curbside of TB2, as the latter will not be any more accessible from the existing road system.
- Reduction of the available parking spaces since the construction site will enclose most, if not all, of the existing parking lot.

## **Water Quality**

It is worth to mention that TB2 site is lacking any natural remaining water bodies, and has an arid environment resulting from a lack of natural permanent water bodies at the site of the proposed terminal building. The main source of surface water run off is likely to come from the contractors dust suppression activities. In which case, run off will be captured and directed into evaporation trenches and ponds where necessary. Any drainage channel or storage pond will be designed away from airport operations, so should a pond fail, airport operations will not be affected.

## **Excavated Waste, Construction Waste and General Refuse**

During the construction phase, demolition solid waste will be generated, as well as solid waste from human activities, such as consumable parts. Moreover, there will be waste oil produced from vehicles and machines during the construction phase. The type and quantities of solid and hazardous waste, which could affect environment, were identified. Construction activities will result in the generation of a variety of wastes that can be divided into distinct categories:

- **Excess Excavated Material:** Defined as inert material removed from the ground and sub-surface that will not be reused on site. The volume to be generated is unknown at this stage.
- **General Construction Waste:** Comprises unwanted materials generated during construction, including rejected structures and materials, materials which have been over ordered or are surplus to requirements, and materials, which have been used and discarded.

### **Operation Phase Impacts**

In the operation phase of the project, some items appeared to pose potential environmental impacts if not managed properly. These are noise, air pollution, wastewater, and solid wastes.

#### **Noise**

The aim of the Noise Impact Assessment is to assess what effect TB2 will have on noise levels generated from Cairo Airport. It is considered unlikely that TB2 itself will contribute significantly to noise effects on the surrounding residential areas, while the increase of air traffic will potentially have a significant impact on the current noise levels generated from the airport.

The assessment of the likely impact TB2 will have on the local noise levels concluded that TB2 will reduce noise levels inside the departure and arrival hall due to the modernizing and expansion of the terminal building. Noise generated from the operation of TB2 itself will unlikely be a significant environmental and social impact for the surrounding residential areas, compared to other noise generating activities at Cairo Airport, with its current runways i.e. aircraft movements now.

The recent construction of runway 5RR-23LL at Cairo Airport will vastly reduce the negative impact of noise on the local population of Nasser City. The alleviation of noise is attributable to two key factors: expected technological advancements in jet

engine manufacturing, and a lower population in the area impacted by flights on the modernized runway 5RR-23LL.

As for Noise Prediction Modeling Results, certain locations were selected to satisfy all common rules and regulations for the Cairo Airport. All of these sites are fully operational now, and give us a full database of results for noise around residential areas and the airport itself. This monitoring station has performed well for its intended target results. There is no need for any new measurements now as all measurements recorded instantaneously with the current system and stored for analysis and manipulation. An extra three noise monitoring terminals will be placed at a selected locations.

### **Air Pollution**

The modernizing of TB2 itself will have no significant impact of air quality on the ambient environment, but increase of air traffic and parking areas around airport will. The presence of two monitoring stations at TB2 and Hall 4 will be sufficient to monitor air quality at the airport.

The main air pollution problem in the region is the suspended particulate matter originating from traffic, open air burning and natural windblown dust (background level). Ozone concentrations may also exceed the AQL values given in Law No.4 during specific periods in the summer season. The emissions of hydrocarbons and nitrogen oxides from airport activities may also slightly increase the ozone formation on a regional scale.

Monitoring of the gaseous concentrations of  $\text{NO}_x$ , CO, and HC (VOC) around the airport has been performed for the present situation and for future developments. The results indicate that the contribution from Cairo Airport on local and regional air quality is very small.

Close to the roads and in the terminal areas, maximum concentrations of  $\text{NO}_2$  and CO may reach levels close to or less than the national and international limit values. The emissions from the airport activities alone will only, in very limited areas and for some very specific peak hour cases, approach adverse levels.

However, cumulative impacts from the contributions from other sources in north-eastern Cairo may lead to impacts that will affect the population's exposure and well being. This gives rise to undesired effects that are caused by the increase of dust levels during the common air crisis in Egypt (Black Cloud) starting from the end of August till the end of November.

This is no simple mitigation for these types of impacts. The best form of mitigation from the point of view of Cairo Airport would be to offer alternative forms of transportation to and from the airport to reduce the dependency on private car usage, and enforce short term parking time zones outside the terminal buildings to reduce idling time to a minimum.

Steps have already been taken by CAC to improve public transport services to and from the airport. CAC has successfully operated a Shuttle Bus service connecting Cairo Airport with hotels and other major destinations.

Baseline data has been collected, allowing informed decisions to be made in the future regarding airport developments, road construction, residential development, and any unforeseen developments in the future.

## **Traffic**

The traffic analysis of impact during the operation phase of TB2 can be concluded is as follows:

- The increased airport traffic will mainly impact Orouba Road and the Autostrade-El Nasr Road. The impacts on the Haikstep link are negligible (less than 3 percent increase in the total traffic volume).
- Traffic volumes on Orouba Road will increase by 14.5 percent, 9.7 percent, and 6.0 percent, during the morning, afternoon, and evening peaks, respectively.
- The saturation level on Orouba Road will be as high as 98 percent during the afternoon peak, representing at-capacity performance.
- Traffic volumes on the Autostrade will increase by 12.5 percent, 10.7 percent, and 6.0 percent, during the morning, afternoon, and evening peaks, respectively.

- The maximum saturation level on the Autostrade will increase from 56 percent to 62 percent. The LOS will pass from the acceptable category "C" to the lower category "D" representing restricted maneuverability.
- Airport traffic accounts for only 20-30 percent of total cordon line traffic.
- Background traffic is expected to increase at high rates during the next decades, in a way that matches and even exceeds the growth in airport traffic.

Therefore, the increase in airport vehicular traffic in years 2010, 2015 and 2025 as a result of the TB2 extension will have variable impacts on the three access roads, with Orouba and the Autostrade-El Nasr Roads being the most affected. Traffic volumes on these two roads will increase by almost 15 percent in the morning peak, which translates into more congested conditions and significantly increased delays.

## **Water Quality**

### **Ground water**

The project site is located at arid locations, with surface & ground water resources extremely limited. Therefore, no natural permanent surface water bodies will be affected by the operation of TB2.

In addition, the groundwater level is relatively deep. This makes it unlikely that the project will have an impact on groundwater, either during construction or as a result of development of the existing project and runway operations. Groundwater will not be abstracted for any form of use as part of this project.

Therefore, due to the depth of the groundwater resources and limited natural surface water, groundwater recharge is an issue that needs to be addressed.

### **Wastewater**

The conducted field trial indicated that the wastewater produced from TB2 is connected to the Nasr City sewer, and the wastewater will be processed and treated at the city sewage treatment plant. However, mitigation measures must be taken into consideration to control pollution from different utilities at TB2 such as workshops, kitchens, oil spillages, etc

## **Aircraft Wastewater**

The wastewater from aircrafts arriving at TB2 is collected and transported by service truck to the existing chlorination station and then discharged to the Nasr City sewer for ultimate disposal and treatment in a city treatment plant.

The quality of wastewater that is generated by TB2 does not comply with permissible limits for Law 44/2000, which regulates the discharge of wastewater into the sewage network. The potential impact of this wastewater is not only blockage of the pipes due to grease build-up, but also clogging of nozzles and pumps if not treated properly before discharging into the city-sewage network.

The existing unit will be relocated because its current location will obstruct the construction of the pier for the new building.

## **Solid/Hazardous Wastes**

Solid and hazardous waste will be generated at both the construction and operation phase. During the operation phase, solid and hazardous wastes will be generated from human activities, airplanes cleaning operation, maintenance, shops, fuel stations, luggage handling as well as cafeterias and kitchen areas.

The only source of hazardous wastes at CIA is the medical wastes (**5 kg/day**) which include expired, unused, spilt, and contaminated pharmaceutical products, drugs, vaccines, and sera that are no longer required and need to be disposed of appropriately. The category also includes discarded items used in the handling of pharmaceuticals, such as bottles or boxes with residues, gloves, masks, connecting tubing, and drug vials.

It has been reported that this waste is transported via El-Nozah Medical Center to Al-Abassia Hospital for incineration.

## **Social Impacts**

### **c. Positive Social Impacts**

- Improved economic conditions will have a positive effect on peoples' living conditions.
- Increase the Egyptian loyalty due to being proud of such projects that are being implemented in Egypt.
- Reducing the noise inside the terminal, therefore making people relaxed.
- Providing job opportunities due to the increase of the commercial area to be 5000 m<sup>2</sup>.
- Facilitation of timely airport procedures due to having more counters to serve customers will make people more satisfied
- Increasing of the area of the terminal halls making people more comfortable, as the halls now are too narrow

**c. Negative Social Impacts**

- Affecting business during construction phase

**Project Mitigation Measures**

The most significant impacts with the corresponding mitigation measures that will be implemented during all phases of the project are as follows:

**Construction Phase**

**Noise**

Noise from construction will unlikely to be a significant environmental concern for surrounding residential areas. Most residential areas are buffered from Cairo Airport by other land uses (i.e. Sinbad City Amusement Park, and military facilities).

Construction noise levels will still affect construction employees. Therefore, the contractor must also manage to perform proper protection actions. The workers exposed to loud noise shall wear earplugs/earmuffs. Therefore, the contractor must manage noise to protect these groups and require having a safety management strategy in place to address these concerns should they arise. The noise complaints register will record what corrective action has been taken, or the reasons why corrective action was not considered necessary.

However, to ensure the effectiveness of the proposed strategies the contractor should be required to undertake additional specific measures to reduce construction noise impacts, such as:

- Prepare detailed plans of work areas and locations of the site, to enable the contractor to plan certain distances to any NSRs. In addition, the layout of worksites should be reviewed to ensure the best use is made of existing and proposed features that could provide screening of NSRs from site noise e.g. site offices, site containers, and so forth;
- To determine specific sound level measurements of typical machines to be used, particularly those activities that have been identified to be noisy or produce sound levels above daytime noise criteria (such a Law 4 Regulations);
- The use of smaller mechanical equipment, which emits lower sound levels, e.g. smaller excavators, lorries to replace dump trucks, and so forth, wherever practicable.

### **Traffic**

To mitigate impacts on traffic as a result of construction activities, the contractor's construction schedule and activity program should be devised in such a way as to minimize, or reduce wherever possible, the potential disturbance for daily airport users. Mitigation measures that will be implemented include:

- The startup of the excavation works at the existing lot. Total parking spaces would be available for airport users during construction work.
- Construct the northern short-term and long-term parking connected with TB2 through a number of shuttle buses that transport passengers and greeters to/from the terminal.
- Provide a safe and adequate diversion for every road link that is closed during the construction phase. The traffic flow to and from Terminal 2 and the established parking lots needs to be maintained at all times.

Moreover, the construction within the premises of the airport will necessitate the movement of heavy vehicles (trucks, bulldozers, etc.) to and from the site. This will result in an increase in the traffic volume on the main access roads, therefore adding to the current congestion problems and causing additional delays. The movement of these vehicles will avoid the peak hours and the congested road sections (such as Orouba Road) to minimize the possible impacts on the traffic stream.

### **Air Quality**

Most of the modernization and updating activities are dust producing, and hence it is expected that the air quality pollution level, especially dust and suspended particulates, will significantly increase in adverse environmental impacts. The following measures should be followed to mitigate such impacts:

- All material resulting from construction must be put in a location protected from wind and regularly sprayed with water until reused for fill or disposed of outside the site.
- Temporary haul roads shall be watered whilst in use to reduce dust production during construction.
- All hauling trucks must be securely covered to eliminate dust scatter while moving in and out of the site.



- All vehicles delivering material to the site shall be covered to avoid material spillage. While unloading material, fall height shall be kept low to minimize fugitive dust generation.
- All construction material should be protected so as to minimize generation of dust.
- Construction site to be watered periodically to minimize fugitive dust generation.
- All vehicles and equipment used should be mechanically checked to avoid excess emission.
- Monitoring of air quality parameters at project sites during operation phase in the future should be considered as a precautionary measure to ensure that the air quality level are within the acceptable limits set by law 4/94
- Regular cleaning of asphalted roads used by construction traffic to reduce re-suspended dust generation.

### **Liquid, Solid and Hazardous Waste**

During construction, it is expected that large amounts of liquid and solid wastes will result from different construction activities as well as from the workers. In order to eliminate and/or mitigate such impacts, the following measures should be strictly applied:

- Contractor documents should include waste management plans to include recycling of solid wastes and off site proper disposal of solid hazardous wastes
- All construction wastes and wastes from contractors' camps and offices will be disposed to designated sites only. Wastes are mainly large stones, loose sandy soil, paper, cement bags, wood, paint holders, and food residues;
- All offices are to be provided with approved sanitary facilities. Care should be given to workers' human excreta disposal in order to eliminate potential sources of infection and unsightly conditions.
- Food residues of constructions workers shall be kept in closed containers.

- Hazardous materials generated during construction, such as fuel oil containers, paint containers, used batteries, spent crank oils from machinery should be segregated and safely disposed in landfill sites dedicated for hazardous wastes.
- During the construction phase of the proposed project, special attention will be made to hazardous wastes (HW) by the contractor. HW will be retained in isolation from other wastes to avoid contamination. Certain materials are hazardous e.g. Asbestos (from demolition), lead, tars, adhesives, sealants, lead-based paint and possible oil pollution under tarmac areas. If such materials are mixed with non-hazardous materials e.g. lead-based paint tins discarded onto a stockpile of brick and concrete, the entire quantity of material becomes hazardous and will be managed as hazardous waste. Therefore, the contractor will remain liable for its waste until it is correctly disposed of. CAC will pay attention to this specific issue and will enforce the contractor (contractual agreement requirements) to provide a clear declaration and attach a legal and valid contract to dump such wastes safely at the certified landfill (e.g. Nassria landfill, Alexandria).
- An investigation was done by the environmental study team and found some asbestos in CAC civil work drawing for TB2 ( dated before 1986)
- A site survey was conducted by NACO/ECG for possible oil pollution under the tarmac area, the results to date (85 % of total work done) indicate nothing there.

However, the major roles of the Contractor are to avoid the disposal option by implementing 4Rs Golden Rule (**R**eduction, **R**euse, **R**ecycle, and **R**ecover) and to manage the disposal of the inevitable wastes.

It is important to ensure that this waste is correctly handled and disposed of as this waste can pose environmental, health and safety risks. The requirements of some countries ensure that organic waste from arriving aircraft is incinerated at the airport. This is not a requirement in Egypt, and therefore aircraft wastes will be disposed of in a conventional landfill.

### **Social and Public Safety**

A number of measures should be taken to ensure that high levels of public safety are maintained. As a matter of general principle Cairo Airport Authority (CAC) should require that the constructions of the renovated extension sites are secured.

Conditions of contract will require the contractor to submit for approval a Health and Safety Plan in which they detail:

- That safe and unrestricted movement to and from TB2 is maintained for passengers and visitors.
- No interaction between construction traffic and airport traffic will occur within the airport during morning and afternoon peak periods.
- The construction site should be clearly and visually fenced to ensure no unauthorized or accidental entry occurs.

- **The owners of the commercial activities and working staff inside TB2:**

The staff of airport shops located in TB2 is the main group that might be affected due to the project implementation, as all shops will be closed during the renovation period (at least 3 years).

Depending on the severity of economic disruption due to the temporary relocation of businesses during the construction period, the workers in the shops might be mitigated if the owners of the shops who have no other branches (2 shops) should be provided with good renting prices after the completion of the construction phase and have the ability to rent the same area in square meters in TB1 or TB3 of the same renting value as in TB2. During construction, CAC has committed to ensure the shops are given the commensurate area in square meters during the construction phase.

Most of the workers are expected to be relocated to TB1 and TB2 and in a few cases to other branches outside the airport. The Environmental Unit of CAC will be responsible for monitoring and documenting the relocation process and any necessary follow-up for each individual worker. These steps will be reported to the PMU. The forthcoming social survey will provide the necessary background information to facilitate this process. The survey will be concerned with the question of how job relocation during construction will be handled and how the

work of the affected people will change as a result of the relocation if any. Different types of retraining opportunities/capacity building programs should be proposed and a practical plan presented on how to handle challenges associated with job relocation to ensure that employees are well equipped to handle new/additional tasks during the construction phase. Such capacity building programs/training will require detailed knowledge about the jobs to be filled during construction. This survey should be implemented before starting the renovation activities. The environmental unit will do the census for the workers before April 2010. The potential jobs and satisfactory degree should be measured and reported to the CAC managers and to PMU. For any grievance, the head of the unit should work to response to any complains raised by relocated staff in cooperation with the owners of their working place.

- **Construction Workers:**

During the construction phase, the workers might be affected if they never follow security procedures, possibly getting hurt easily. The only mitigation measure is to oblige them to follow the procedures in order not to get injured. A supervisor should be present at all times to ensure safety procedures are followed. In addition, a clear medical insurance strategy should be tailored to those daily wage workers.

- **People with Allergies :**

People with allergies may be affected by the dust during the construction phase. However, it is recommended to flush water through construction areas to reduce dust.

- **Drivers:**

Drivers might be affected due to the congestion and traffic jams. However, a clear traffic strategy might reduce the traffic jam.

### **Construction Safety**

- All contractors must supply their workers with proper clothing, gear, and appropriate safety training and instructions.

## **Operation Phase**

### **Operational Noise Mitigation**

It is worth highlighting that noise generated from the operation of TB2 itself will not likely be a significant environmental impact for surrounding residential areas, compared to other noise generating activities at Cairo Airport. This is largely due the fact that the TB2 activity itself will emit little noise and Noise Sensitive Receivers (NSRs) are some distance from the TB2 facility.

However, airport employees and visitors inside TB2 will be protected from excess aircraft noise. Those employees working on the aircraft apron servicing the aircraft between arrival and departure will be exposed to elevated levels of noise. Applying the health and safety rules will minimize the noise affect on those groups.

For air traffic noise; using the new runway 05RR-23LL will reduce noise effects on populated areas

### **Operation Air Quality mitigation**

The best way to ensure that all mitigating measures were strictly applied in consistent and environmentally sound fashion is to provide for a rigorous monitoring program. The purpose of the monitoring program during the operation phase of the project is to highlight the problems and benefits of prevention and minimization. It is vital to determine the quantity and types of pollutants which are being produced.

The EIA study presents the following strategies to achieve the best practice in air quality management at TB2:

- Development of an air quality management strategy
- Implement programs for emission measurement and implementation of action plans where required
- Support and promote emission abatement technologies, i.e. for vehicles operating at the airport

- Evaluate through trials and peer-review, the opportunities for new operational procedures for aircraft
- Ensure ground power and pre-conditioned air is provided to all aircraft parked at the terminal gates to reduce the need for aircraft to use auxiliary power units (APU's)
- Encourage airport users, staff and employees to use alternative means of transport to and from the airport, i.e. buses/public transport
- Support any proposal or development projects to improve public transport links to the airport and reduce traffic congestion, i.e. supporting and promoting the use of the Ring Road as an alternative route to the main arterial road - Orouba Street
- Development and implementation of spill management plans for refueling operations and storage areas, to minimize evaporation into the atmosphere;
- CAC authority to undertake energy consumption audits of the operation of the terminal building and associated facilities, audit to produce recommendations to conserve energy, which should be implemented where possible

### **Vehicle Traffic**

CAC should promote vehicle traffic control measures, and continue to encourage the reduction of private car dependency for its work force, by encouraging staff to use public transport or car pool to get to and from the airport.

### **Aircraft Operations**

CAC should work towards reducing emissions produced by aircraft at ground level

- By managing and implementing operational improvements wherever possible.
- CAC should continue to support the use of cleaner technologies in the use and manufacture of aircraft engines and the development and use of cleaner burning aviation fuel. Once the monitoring program is established, CAC should monitor the emission rates and distribution of the aircraft LTO cycles, and

investigate possible alternative operational procedures in aircraft movements to reduce emissions where possible.

### **Monitoring**

There are two air quality monitoring stations that were established to monitor the impacts on local air quality as a result of airport and airport related vehicle emissions (at least PM10, NO<sub>x</sub>, SO<sub>x</sub>, CO and HC's). These stations were established in conjunction with EEAA and incorporated into the regional Cairo monitoring network. Information obtained from monitoring must be used by the Environmental Department to target primary emission sources, and prioritize management and response initiatives, taking into account the impact of these emissions on local air quality.

### **Operation traffic mitigation**

There is a need for Traffic management measures to improve the usage of the Ring Road instead of Orouba Street. The Ring Road is currently accessible from the airport via the Haikstep Road or via the Autostrade and the new Suez Desert Highway. However, the lack of adequate signs reduces the usage of these connections and makes the high capacity Ring Road practically unused by airport traffic. Improvement of the signage scheme around the airport and on the roads leading the Ring Road is needed to encourage the use of this main arterial. It is anticipated that Ring Road would therefore attract most of the traffic heading to destinations other than Cairo since it avoids the internal congested roads of the city. Although the shift will not occur overnight, it is envisaged that Ring Road could attract more then 15 percent of the traffic at Orouba Road, which implies a proportional decrease in the level of saturation, increasing operational efficiency.

### **Water quality**

#### **Ground Water**

There are no activities planned in the construction that can contaminate ground water. At the same time, the groundwater depth exceeds 70m at airport site. It is unlikely airport operations will impact this resource. However, best practice will still be employed as a precautionary measure to protect soil and to ensure ground water resources are not contaminated.

### **Sewage and Waste Water Management**

TB2 wastewater and sewage system is connected to the Nasr City sewer system for processing and disposal at the city sewage treatment plant. Several measures have already been taken to prevent pollution at sources and to improve the quality of the waste discharging to the system such as:

- Wastewater from kitchens will pass through grease traps before discharging into the disposal system;
- Oil and coarse sediment traps will be installed on all storm water drain inlets;
- Spill management response systems will be put in place to ensure spills do not enter the sewerage system.

### **Aircraft Wastewater**

Wastewater from aircraft arriving at Cairo International Airport was collected and transported by service truck to the existing chlorination station at TB2. Tests and results obtained regarding wastewater samples from the treatment unit were carried out at the National Research Center's laboratories. The wastewater that is generated does not comply with permissible limits for Law 44/2000, which regulates the discharge of wastewater into the sewage network.

CAC will review and upgrade the existing Aircraft's wastewater chemical treatment unit before relocating it in order to improve its treatment efficiency and generate treated effluent complying with the permissible limit of law 44/2000.

CAC made a declaration guaranteeing that they will develop a processing unit for aircrafts wastewater after being relocated to the new site, and that the specifications of

the wastewaters drained from the unit to the airport sewage are in compliance with the standards stipulated in law No. 62/1993, that is amended by the ministerial decree 44/2000. Please see Appendix 10 Chlorination Plant.

In addition, CAC Environmental Unit will design a strict monitoring program to follow up with the operation and maintenance (O&M) in order to secure the treatment efficiency and compliance with the environmental law.

## **Solid Waste**

The day-to-day operation of TB2 also has the potential to generate large amounts of waste from passengers and airport visitors using offices, shops, cafes and restaurants. A comprehensive review of terminal waste to identify opportunities for recovering recyclable materials from the waste stream shall be carried. This review will assess each retailer and outlet, identify opportunities to segregate mixed dry recyclables at point of collection and determine what additional facilities are required.

The TB2 authority should develop a Waste Management Plan based on the following priority principles:

- Avoidance and minimization of waste generation wherever possible;
- On-site reuse of materials. It is unlikely that this will yield a significant reduction in waste generation, but the practice should be applied wherever possible;
- Recycling. A contractor should be employed to remove all recyclable material to an appropriate off site recycling station;
- Off-site disposal. Must be undertaken in accordance with the relevant guidelines or regulations of the city;
- Redevelopment of the current Airport Transfer station.

The final disposal site for all waste types must be agreed to by the TB2 authority in consultation with CAC.

General refuse bins must be provided inside and outside the terminal building in sufficient number and size. Bins must be covered to prevent wind collecting litter. All



TB2 company staff must abide by the waste management plan, and it should be distributed to all other commercial activities inside the terminal building for adoption.

### **Aircraft Waste**

As the predicted number of aircraft arriving at TB3 increases over time, so to will the amount of waste that will require handling and disposal.

It is important to ensure that the waste from aircraft arriving at TB2 is correctly handled and disposed of as this waste can pose environmental, and health and safety risks. Therefore, it has to be disposed of in a conventional landfill. Cabin waste like papers and magazines should remain separated and transported for offsite recycling. Food waste should be disposed of to landfill as soon as possible, with any storage time at the airport minimized.

### **Onsite Waste Storage, Transportation and Offsite Disposal**

Any temporary storage of waste on site should be in bins that are fitted with lids to ensure no rainwater can enter, that no waste material will be blown away by wind, and so no vermin can access the waste. Waste receptacles should be made secure to stop any opportunists from gaining access to the refuse.

Where offsite disposal is required, the waste management plan must:

- Specify the handling and storage procedures to be adopted to minimize loss or leakage;
- Ensure timely removal of waste offsite;
- Require the use of authorized or licensed waste collectors for specific waste types;
- Include measures for the cleaning and maintenance of waste storage and handling areas;
- Demonstrate compliance with all appropriate waste disposal regulations;
- Include procedures for the monitoring of waste collected to ensure correct disposal;

- Include proposals for the establishment and maintenance of a database on the quantities of wastes generated, recycled and disposed of.

Transit of waste should ensure that no material is lost from the vehicle during transportation to the disposal site. The disposal site will be a licensed facility. The TB2 authority must get CAC approval to use a particular facility, as CAC should ensure the facility to be used meets basic environmental requirements.

### **Environmental Management Plan (EMP)**

The Environmental Department of the CAC with consultation of PMU will supervise all activities related to the operational Environmental Management Plan, and in particular the implementation of the mitigation and monitoring measures. The Environmental Department will need to hire contractors to fulfill the majority of these requirements, especially noise and air quality monitoring, which will be done in conjunction with the monitoring of the runway. The Environmental Department will be responsible for the supervision of these contracts.



Table (3) Institutional strengthening and training for implementation requirements

Date / Institutional Strengthening Activity	Position(s)	Responsibilities		Cost Estimates (\$)
		Implementation	Supervision	
<b>Winter 2010</b> Modification of organization for environmental unit at CAC	– Director – Environmental Monitoring Center Department Head – Environmental Inspection and grievance Department Head – Environmental Affairs Department Head	Institutional capacity building consultant	- CAC Management	50.000
<b>Summer 2011</b> Specialized updating environmental training courses for CAC staff in the following subjects: <ul style="list-style-type: none"> <li>• Noise,</li> <li>• Air quality,</li> <li>• Waste management and pollution abatement.</li> </ul>	– Director – Environmental Monitoring Center Department Head & senior staff – Environmental Inspection and grievance Department Head – Environmental Affairs Department Head – Engineers and chemists	Environmental consultant (environmental consultant to be hired)	- PMU unit - CAC Management	60.000
<b>Spring 2013</b> Environmental awareness program for CAC and	– Environmental unit at CAC	Press department of CAC	- CAC Management with Environmental	60.000



public using Cairo Airport			unit at CAC	
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Table (4) Summary of Environmental Management Plan during the construction and operation phases and their proposed mitigation measures of TB2

Project Activity	Potential Environmental/Social Impacts	Proposed Mitigation Measures	Institutional Responsibilities		Cost Estimates (\$)	Monitoring indicators
			Enforcement	Coordination		
<b>During Construction</b>						
Construction activities at areas accessible to the public	Safety risk to the public at or near construction sites.	- Construction sites closed to the public.	Contractor	PMU and CAC environmental unit	part of the construction cost	
	Noise and emissions from construction Vehicle/equipment exhaust	<ul style="list-style-type: none"> <li>- (As per Factory Act requirements) Shall to utilize hearing protection./ Workers exposed to loud noise</li> <li>- Site design layout to avoid noise Impacts on residential areas wherever possible and/or</li> </ul>	Contractor	PMU and CAC environmental unit.	To be covered as part of the construction cost.	Noise complaints register to identify concerns and check validity.



		necessary.				
	Soil and Painting removal, modification, mixing, compaction, loss, or contamination due to modernization activities.	<ul style="list-style-type: none"> <li>– Vehicle movements will be restricted to construction areas and roads.</li> <li>– Contractors will work according to strict management requirements.</li> <li>– Topsoil and excess soil cleared from the modernization activities will be stored in the soil storage area and must be protected from wind and regularly sprinkled with water until reused for fill or disposed outside the site</li> </ul>	Construction contractor	Third party Inspection. Biweekly (environmental consultant to be hired)	To be covered as part of the construction cost.	Monitoring of PM10 (Dust Levels) on the concerned sites monthly.



Project Activity	Potential Environmental/Social Impacts	Proposed Mitigation Measures	Institutional Responsibilities		Cost Estimates (\$)	Monitoring indicators
			Enforcement	Coordination		
<b>During Construction</b>						
	Generation of dust and emissions due to modernization activities.	<ul style="list-style-type: none"> <li>– All material resulting from excavation must be put in a location protected from wind and regularly sprinkled with water until reused for fill or disposed outside the site.</li> <li>– All excavations shall be backfilled and reinstated to a similar condition as existed before the excavation started.</li> <li>– Temporary haul roads shall be watered whilst in use to reduce dust production during construction.</li> <li>– All hauling trucks must be securely covered to eliminate</li> </ul>	Construction contractor	Third party Inspection. (environmental consultant to be hired) Reports to Environmental Unit at CAC	\$15,000 part of the construction cost	Monitoring Dust Levels. On the indoor working environment  Ambient NO <sub>2</sub> , SO <sub>2</sub> , and CO concentrations



		<p>dust scatter while moving in and out of the site.</p> <ul style="list-style-type: none"> <li>- All vehicles delivering material to the site shall be covered to avoid material spillage. While unloading Material, fall height shall be kept low to minimize fugitive dust generation.</li> </ul>				
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Project Activity	Potential Environmental/Social Impacts	Proposed Mitigation Measures	Institutional Responsibilities		Cost Estimates (\$)	Monitoring indicators
			Enforcement	Coordination		
<b>During Construction</b>						
		<ul style="list-style-type: none"> <li>- All construction material should be protected so as to minimize generation of dust.</li> <li>- Construction site to be</li> </ul>				Vehicles and equipment



		<p>watered periodically to minimize fugitive dust generation.</p> <ul style="list-style-type: none"> <li>- Limiting vehicles and equipment speed inside the construction site and unpaved roads by introducing speed depth to reduce re-suspended dust generation.</li> <li>- Restricting off road driving</li> <li>- Regular cleaning of asphalted roads used by construction traffic to reduce re-suspended dust generation.</li> <li>- All vehicles and equipment used should be mechanically checked to avoid excess</li> </ul>				<p>passing normal inspection test</p>
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Project Activity	Potential Environmental/Social Impacts	Proposed Mitigation Measures	Institutional Responsibilities		Cost Estimates (\$)	Monitoring indicators
			Enforcement	Coordination		
			During Construction			
	Waste disposal	Adequate management of asbestos and any possible hazardous waste	Contractor	CAC Environmental Unit throw field supervision	\$100/ton + additional, transportation/disposal costs to contractor bid price	review of contractor special record and evidence from certified landfill
	Risk of damaging infrastructure	- Collect infrastructure maps and site tracing -perform a radar survey for all utility before digging	Contractor	CAC authorities	Part of construction cost	Record of accident
	Habitat displacement, lose, and destruction	- Construction activities will be kept within the boundary of the site. - Site access roads will	Contractor	CAC Environmental Unit	\$10,000 part of the construction cost	Population lose



		<p>optimized to traverse a small proportion of the available habitat,</p> <ul style="list-style-type: none"> <li>– Extra care will be taken to ensure that the footprint in the project area of influence will be minimized</li> <li>– Construction will take place as quickly as possible.</li> <li>– Construction activities will be timed to avoid the most sensitive nesting periods.</li> <li>– Light, noise and movement will be kept to an absolute minimum.</li> </ul>		<p>Third party Inspection. Monthly (environmental consultant will be hired)</p>		
	Relocation of shops	– Possible complain throw	PMU and	CAC	CAC	Number of complain



	and workers in TB2	grievance/complain system if any	CAC authorities	Environmental Unit	Environmental Unit - day to day work	record
	Construction Safety	<ul style="list-style-type: none"> <li>- The construction contractor will submit an HSE plan for construction activities.</li> <li>- All contractors must supply their workers with proper clothing and gears (PPE) and appropriate safety training and instructions.</li> <li>- The construction workers camp will include adequate sanitary facilities, and will be protected from high noise level as mush as possible.</li> </ul>	Construction contractor	<p>CAC Environmental Unit</p> <p>Third party Inspection. Monthly ( environmental consultant to be hired )</p>	part of the construction cost	<p>Workers camp kept in good condition</p> <p>Number of accidents</p>



Project Activity	Potential Environmental/Social Impacts	Proposed Mitigation Measures	Institutional Responsibilities		Cost Estimates (\$)	Monitoring indicators
			Enforcement	Coordination		
<b>During Operation</b>						
	Noise impacts on communities.	<ul style="list-style-type: none"> <li>– Adopting and applying the ICAO standards for landing and takeoff procedures</li> <li>– Management of landing and take off between runways so as to minimize noise between 11.00pm and 6.00am</li> <li>– Install three new permanent automatic noise monitoring system with current software to correlate radar Information to noise level.</li> <li>– Noise Consultant for the INM monitoring system</li> </ul>	<ul style="list-style-type: none"> <li>– Environmental unit at CAC</li> <li>– External Contractor</li> <li>– consultant for 6 month</li> </ul>	PMU and CAC environmental unit	\$75,000	Noise Levels Do not exceed Compliance with Law 4, 1994 and its modification.



		<b>Institutional Responsibilities</b>				
		compilation and noise analysis.			\$36,000	
	Air Quality during operation on indoor environment	<ul style="list-style-type: none"> <li>- Portable gas analyzers for measuring the gaseous emissions.</li> <li>- Portable Dust monitor.</li> <li>- Ventilation meter.</li> </ul>	External Contractor and consultant	PMU and CAC	\$70,000	Following up and checking the indoor environment validity

Project Activity	Potential Environmental/Social Impacts	Proposed Mitigation Measures	Institutional Responsibilities		Cost Estimates (\$)	Monitoring indicators
			Enforcement	Coordination		
<b>During Operation</b>						
	Soil contamination during operation	- A spill response plan will be developed for the site that will deal in detail with the	CAC Environmental Unit	CAC Environmental Unit	part of the construction cost	Number and volume of fuel/oil spill and/or leakage incidents



	<p>Aircraft's Wastewater</p>	<p>identification and response to major, non-routine incidents.</p> <ul style="list-style-type: none"> <li>- Areas susceptible to potential spills of contaminants, such as diesel fuel loading, storage and transfer areas, will be covered in an impermeable layer (hard cover) with drainage to a suitable holding, separation or treatment facility.</li> <li>- Monitoring program to follow up with the operation and maintenance (O&amp;M) in order to secure the treatment efficiency and compliance with the environmental law.</li> </ul>	<p>CAC Environmental Unit</p>	<p>CAC Environmental Unit</p>	<p>CAC Environmental Unit -day to day work</p>	<p>Water analysis record and progress reports every month after construction of the new plant</p>



Technical Assistance during operation						
Supervision and monitoring of EMP		<ul style="list-style-type: none"> <li>- Hiring local Environmental Consultant to assist and supervise the implementation of the EMP and noise monitoring stations</li> <li>- Follow Up the daily monitoring of indoor environment dust.</li> <li>- QC/QA of ambient air quality monitoring stations to estimate the effect of modernization and updating activities on the ambient environment</li> </ul>	External EMP consultant for 18 month.	PMU and CAC Environmental Unit	\$70,000	Compliance with EMP

**Total combined cost for CB, EMP and other activity that CAC will be responsible for is \$ 421,000 USD**

Implementation of special capacity development in pollution abatement and in EMP's for CAC-Environmental Department and Air Traffic Control staff to give them an understanding and awareness of the impact aircraft operations (i.e. flight paths) shall be conducted. Environmental training should be included as a condition for new employment contracts, or current employee advancement schemes.

**Public Consultations and Disclosure**

The first public consultation meeting for the project held on September 8, 2009 at Horus Meeting Hall in Terminal Building #2 of Cairo Airport during the time of Ramadan.

The meeting was publicly announced in the most widely distributed newspaper in Egypt (Al-Ahram).

The meeting was attended by 55 participants, with almost equal gender representation (47% of the attendees were females, 53 of the attendees were male).

**The attendance percentages of the first public meeting:**

- 37% of the attendees were general airport staff.
- 17% were from the Egyptian Company for Airports).
- 16% of the attendees were from academia and research organizations
- 7% from the environmental management at the airport.
- 7% were from the airlines.
- 5% from the Ministry of Aviation.
- 2% of the attendees were business associates.

Invitation was passed to all appropriate NGOs, syndicates and others.

All aspects of the project was discussed, and it was well-received by those in attendance.

The main issues raised by the attendees can be summarized as follows:

The quantitative nature of the analysis was not clear, as it was perceived that the analysis was done on a qualitative basis. This included questions on the possible need of mathematical modeling for air quality impacts and quantitative risk assessment.

The second public consultation meeting for project was held on September 29, 2009 at the same Horus Meeting Hall in Terminal Building #2 of Cairo Airport.

There was a Radio interview with environmental Manager Unit at CAC broadcast live and repeated on Cairo radio on the same day.

The meeting was attended by 60 participants, with both gender representation (40 % of the attendees were females, 60% of the attendees were male).

**The attendance percentages of the second meeting:**

- 44% of the attendees were general airport staff.
- 10 % was from the Egyptian Company for Airports).
- 10 % of the attendees were from academia and research organizations
- 15 % from the environmental management at the airport.
- 5 % from the Ministry of Aviation.
- 3 % of the attendees were business associates.
- 7 % was from NGO
- 3% was from media
- 3 % was from EEAA



At this meeting, issues raised from the first meeting were fully addressed with clear, concrete responses from members of the team compiling the EIA, especially related to the social impact and air quality modeling.

During the second meeting a full prediction model for air quality and a social study was introduced to the audience with comprehensive details.

The main issues raised during the second meeting were about air quality modeling details, PM10 concentration in Cairo and around Cairo Airport, noise and air quality inside the modernized TB2 at operation phase, and solid waste management for Cairo Airport.

The study team relays detailed responses about these issues to the full satisfaction of the audience. Most of the audience clearly indicates their approval about the findings of the EIA report and its conclusions.

In conclusion, the project was predicted to result in a number of positive impacts on the natural and socio-economic setting of the area. In addition, most of the components of the project were found to pose no, or only insignificant, environmental risk, with the implementation of certain steps to improve the construction and operation phases.

The final EIA conclusion indicated that the project, if implemented with the suggested mitigation measures, will result in some unavoidable, but minimal environmental risks. This is considered to be within environmentally acceptable limits as set by both the World Bank, and Egyptian laws and regulations.

### **Structure of the Environmental Impact Assessment**

The structure of the Environmental Impact Assessment follows the outline contained within the Project Terms of Reference:

- Executive Summary.
- Background Information
- Policy, Legal, and Administrative Framework.

*Final report for updating and modernizing TB2*

- Description of the Proposed Project.
- Description of the Environment.
- Significant Environmental Impacts.
- Analysis of Alternatives.
- Mitigation Management Plan.
- Environmental Management and Training.
- Monitoring Plan.
- Public Participation.
- List of References.

This document also contains annexes of supporting material:

- **Annex 1:** Noise
- **Annex 2:** Air Quality
- **Annex 3:** Social impact Assessment
- **Annex 4:** Environmental Unit at Cairo Airport Company
- **Annex 5:** Events of the 1<sup>st</sup> Public meeting
- **Annex 6:** Events of the 2<sup>nd</sup> Public meeting
- **Annex 7:** meeting 1 Final presentation
- **Annex 8:** meeting 2 Final presentation
- **Annex 9:** Environmental unit at CAC TB3 lesson learned
- **Appendix 10** Chlorination Plant
- **Appendix 11** CAC Commitment
- **Appendix 12** geotechnical investigation results