

IV Proposed Terms of Reference

The EIA study shall be carried out as per EIA Notification, 2006 and subsequent amendments. Standard TOR, 2015 and EIA Guidance Manual for Airports, MoEFCC, 2010 shall be followed while preparation of EIA. Proposed Terms of Reference of the EIA Study is as follows:

A. INTRODUCTION

1. Project Background and brief description of the project
2. Profile of the project proponent, name and contact address, implementing organization, project consultants etc.
3. Land description- plot/ survey numbers, village, tehsil, district, state and area of the land
4. Description of Centre/State/Local regulations and standards applicable for Airport projects.
5. Any litigation(s) pending against the proposed project and / or any directions or orders passed by any court of law/any statutory authority against the project shall be detailed out.

B. PROJECT DESCRIPTION

1. Objective and background of the project
2. Brief description of the project in terms of location and surroundings.
3. Project area connectivity
4. Land details, ownership and acquisition requirement and status
5. Existing and project traffic
6. Project Interventions and proposed area statement
7. Layout plan / Master Plan of proposed airport development at the scale of 1:5000 or as may be appropriate.
8. Layout of covered and open facilities, parking, landscape, sewage disposal facilities, waste disposal, power supply, fire station, fuel farm, storm water management facilities, water supply etc.
9. The details of Source of water, water requirement, use of treated waste water shall be examined and prepare a water balance chart.
10. Waste Water Treatment and its details including target standards.
11. Type and quantity of solid waste generation due to the proposed project will be provided along with the existing practice for solid waste management
12. Requirement of natural resources and their sources are to be detailed out.
13. Villages, settlements need for rehabilitation and resettlement (R&R) of communities/ villages along with present status of such activities
14. Construction technology to be adopted
15. Time frame for project initiation, implementation and completion shall be detailed.
16. Project cost

C. DESCRIPTION OF ENVIRONMENT

1. Primary data and secondary data to be collected to establish baseline environmental status within 10 km of the project area boundary. Secondary data should be collected within 15 km aerial distance for identifying environmental sensitivity.
2. Environment description of the project site in terms of its physical (geology, hydrology, drainage pattern, topography, historical climatic parameters, air quality, water quality, noise levels, soil quality), biological (flora, fauna, endangered/ rare species, protected areas) and socio economic (demography, livelihood, affected persons, affected household, affected structures, vulnerable community/ people, cultural heritage etc) environment will be given.
3. Parameters for air quality monitoring would be oxide of nitrogen (NO_x), carbon monoxide (CO), Hydrocarbons (HC), sulphur dioxide (SO₂) and particulate matter (PM₁₀ and PM_{2.5}). Compile the Mean monthly normals of atmospheric parameters, from previous years data recorded by the nearest IMD station. The parameters selected are atmospheric pressure in (mb) and relative humidity in percentage both recorded at 0830hrs & 1730hrs IST of each day. Maximum and minimum temperatures in °C of each day; 24hrly rainfall in millimetres (mm) recorded at 0830hrs IST and 1730hrs of each day. The normals for each month are to be calculated and shown in a tabular form. Wind Roses for each month giving the wind direction, speed and percentage frequency will be given. Most probable wind speed class and wind direction at the nearest IMD site is to be estimated from this. Sunshine duration, cloud cover "normal values" is to be compiled from secondary data for getting the monthly "normals".
4. Noise levels will be monitored for 24 hours at hourly interval in dB(A). L₁₀, L₅₀, L₉₀, Leq, L_{dn}, L_{day} and L_{Night}.
5. A map of the study area (10 km around project boundary) delineating the major topographical features such as land use, drainage, protected areas and man-made features like roads, railways, major industries will be prepared. Existing land use pattern will be mapped for 10 km radius around project area boundary. Land use map of the project area shall be prepared in 1:25000 scale delineating the cropped area, forest, built up areas etc.
6. Digital elevation Model, Contour map, slope map and drainage map will be provided. Any obstruction of the same by the project will also be identified.
7. A map of study area covering aerial distance of 15 km from the proposed project boundary delineating the environmental sensitive areas as specified in Form I of EIA, Notification 2006. Environmentally sensitive features viz. Protected areas, water bodies, critically polluted area as per CPCB etc will be identified and marked on the map based on Topo sheet, Satellite imagery and ground truthing
8. Flora and Fauna details within the project area and 10 km radius. Identify endangered or rare species, if any. Demarcation of forest area on map that needs to be diverted. List of species and girth wise details of trees to be felled will be prepared and submitted.
9. Examine the water bodies including seasonal ones within the area of impact along with their status, volumetric capacity, quality and likely impacts on them due to the project.

D. IMPACT ANALYSIS AND MITIGATION MEASURES

1. Environmental impacts on the project land and its surrounding developments and vice versa.
2. Alterations in the natural slope and drainage pattern and their environmental impacts on the surroundings.

3. Analyze baseline environmental quality along with projected incremental load due to the project. Emission from DG sets to be used and road traffic will be taken into consideration while estimating the impacts on air environment.
4. Impact of noise during construction and aircraft operation on identified sensitive (both man-made and natural) receptors will be examined. Prediction of increase in noise levels and spatial coverage for the future years will be done using mathematical modelling software.
5. Possibilities of surface water, ground water and soil contamination will be anticipated.
6. Examine road/rail connectivity to the project site and impact on the traffic due to the proposed project. Present and future traffic and transport facilities for the region will be analyzed with measures for preventing traffic congestion and providing faster trouble free system to commute.
7. Impact on biological environment in terms of loss of flora and fauna will be examined and mitigation measures for their compensation shall be devised.
8. Socio economic impacts of the project and mitigation measures
9. Mitigations measures will be devised for all anticipated impacts to the bio-physical and socio-economic environment from the proposed activities during construction and operation phases

E. DISASTER MANAGEMENT PLAN

1. A comprehensive Risk Assessment & Disaster Management Plan including type of emergency (internal or external) and emergency evacuation plan during natural and man-made disasters.

F. PROJECT BENEFITS

1. Details of improvement in physical and social infrastructure, if any, employment potential and other possible benefits will be given.

G. ENVIRONMENT MONITORING AND MANAGEMENT PLAN

1. Submit Roles and responsibility of the developer/ contractor etc. for compliance of environmental regulations under the provisions of EP Act.
2. Liquid waste management plan will be prepared. Sewage Treatment plant and its details including target standards. Rain water harvesting proposals will be made with due safeguards for ground water quality. Maximize recycling of water and utilization of rain water.
3. Storm water management plan will be provided.
4. Solid Waste Management plan during construction and post construction phases.
5. Traffic Circulation System and connectivity with a view to ensure adequate parking, conflict free movements.
6. Green cover and landscape plan will be prepared.
7. Examine and submit details of use of solar energy and alternative source of energy to reduce the fossil energy consumption. Energy conservation and energy efficiency.
8. Environmental monitoring program will include the frequency, location, parameters and budget for both construction and operation stage.
9. Environment management plan for both operation and construction stage along with roles and responsibility and cost provisions will be provided.
10. The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP will be given.