

Spatial Database for Environment Studies of Projects

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SUMMARY

It is compulsory to carry out preliminary, Environmental Assessment, Environmental Impact Assessment (EIA) or Initial Environment Assessment (IEA) prior to implementation development programs in Nepal. Environmental protection Act 1997 and Rules 1998 of Nepal and guidelines of major multinational financial institutions like ADB, WB guidelines will provide guidelines on assessment and mitigation on environment effects. These regulations specify the areas of works and do not describe requirement of the spatial data base.

It involves preparation of terms of reference (TOR), scoping documents, Environment Management Plan (EMP), resettlement action plan(RAP) and monitoring framework to effective monitoring at the implementation phase and carry out base line survey, qualitative and quantitative analysis, social impact assessment (SIA). The major task is also land acquisition for the projects.

Digital topographical maps are proposed for the project areas at 1:500 – 1:10,000 (point clouds for 5m to 100 m interval), digital cadastral map at the scale of 1:500 – 1:2500 and present land use maps at prepared using aerial/satellite imagery of about 0.5 or better resolution. Base line survey is carried using questionnaires of all affected land owners along with FGD survey method. Extensive field visit was carried out by experts and their environmental and social impact assessments described in the reports. Various experts present their finding in verbal texts but they could be easily presented in GIS formats/spatial data base, which are easier to understand the situations.

In this article, it is briefly described how the various works of EIA/IEA and SIA are carried out, specify minimum data base and the available spatial data base will be utilized for proper environmental assessments and monitoring, and acquisition of real estate property smoothly for the project.