

Planning for Engineering Projects with the Reference to Application of Environmental Impact Assessment

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Key words: EIA, GIS, Environmental modeling, engineering projects

SUMMARY

In general, the engineering projects produce localized changes to the air, the hydrology, and the land mass. Hence, they will cause various environmental biotic impacts. Therefore, the engineering specifications of the proposed actions should be developed to predict the biotic impacts on the existing physical environmental with some degree of accuracy.

Evaluating the environmental impacts of these projects refers to many sources of data. Overlaying the non-heterogeneous data sources can be implemented and analyzed with the help of the GIS techniques. Such a technology will offer alternatives based on the given data and their weights. Also, it can assess the proposed project site and its environmental context. Moreover, it can derive insights that can help guide project planning and design.

In this paper, the importance of the EIA is presented. Basic characteristics of impacts, steps and methodology of assessments are itemized. The need of the GIS technology for this purpose is highlighted. A case study concerned with the integration between environmental factors – hand in hand with the engineering ones is presented.