ENVIRONMENTAL IMPACT ASSESSMENT IN MALAYSIA - WITH REFERENCE TO DAM CONSTRUCTION

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Summary

Over the last decade, the construction of dams has been one of the contentious issues in Malaysia. This situation follows from the development of the Malaysian economy. The dissertation describes the importance of Environmental Impact Assessment (EIA), specifically in dam construction, and its limitations in implementation, especially in the developing countries. Some of the most significant impacts commonly associated with dam construction such as : ecological impact; changes in water quality; reservoir sedimentation; erosion; deforestation; resettlement; and seismicity are also discussed.

The importance of EIA in decision-making is beyond doubt. Furthermore, EIA is viewed as both a science and art, where integration of all the various multi-disciplinary bodies is deemed necessary so as to make it a success. It should be noted that the purpose of EIA is by no means to inhibit economic development, but rather its aim is to enhance development, with any possible adverse impacts being made a minimum.

Despite some of the constraints present in the implementation of EIA and illustrated in the present study, this does not mean that EIA should be given a low priority. In fact, the author

is in the opinion that at least, the simplest form of EIA e.g. checklists or matrices should be carried out. This could become the 'first step' to further, advanced techniques e.g. simulation. Furthermore, it would be better to formulate an EIA, however crude it may be, rather than not to have any study at all. A particular case study of a dam in Malaysia is given as an example of the level of study which is frequently performed. In this regards too, the matrix technique is proposed to be the most suitable method to be undertaken for this case study, given the available present data and resources. However, the simulation technique is seen to be more appropriate in Malaysia in the near future especially for post-EIA, given all the available resources and coupled with some expertise.

Much of the material reviewed here is of a qualitative nature and in order to provide a quantitative insight to EIA, a simple, univariate mathematical catchment modelling and simulation study is also given, to illustrate what might be possible given more time and resources. The practical problems of stochastic modelling are clearly shown in the analyses undertaken.