

## **Development of expert database system for environmental impact assessment (EDEIA)**

### **ABSTRACT**

Expert Database System for Environmental Impact Assessment (EDEIA) was developed using FoxPro and CLIPS. It consists of a database and an expert system prototype. The EDEIA system developed a database system that allows an EIA expert to manage EIA report information and produced a set of rules that enable the ES to be aware of the existing environment component classes. The rules were developed according to the environmental component classification characteristics. The system is based on three assumptions: the environmental components and prescribed activities should be classified, the description of environmental component classes as well as the prescribed activities information must be collected; and finally, the potential impact, mitigation measures and residual impact have to be clearly specified. The main role for EDEIA is to assist EIA experts and companies in producing complete and efficient EIA reports. The system is very useful in supporting EIA expert prediction of expected potential environment impact and best method for mitigation measures. The EDEIA system has friendly graphical user interface, as well as satisfying EIA report requirement.

**Keyword:** Environmental impact assessment; Expert system; Database management system; Expert database system; CLIPS; FoxPro