

## Fuzzy environmental-economic model for land use planning

### ABSTRACT

Sustainable development has been accepted in modern economic life to balance the economic growth and environment. This requires resources and environment that are be utilized today can be sustained and transferred in good condition to future generations. Land use is the most important issue in sustains management of resources. Because economic benefits obtained from the land should take into account environmental aspects such as flood, erosion etc. The Fuzzy theory was introduced by Zadeh as a means to model the uncertainty of natural language and is described by membership function. Fuzzy logic is a super set of conventional (Boolean) logic that has been extended to handle the concept of partial truth-truth values between "completely true" and "completely false". This paper proposes a mathematical programming of fuzzy model for land use optimization with economic, social and environmental objectives and implications in regions. In short, the model is a fuzzy multi-objective linear programming that determines the optimal land use of region.

**Keyword:** Fuzzy multi-objectives; Land use; Environmental-economic model