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Using Allocation Models for Regional Planning in GIS Environment

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There are some resources and some demands in any part of the world. We use the resources to response the demands. However, we need to balance these two for the sake of sustainability and also creating priorities for the demands. Considering the spatial distribution of the resources and also the settlements in a region, we could apply allocation models to optimize resources. This is an important issue in spatial economics.

The allocation models are divided into three classes: private allocation models, public allocation models and emergency allocation models. GIS environments are the best tools for running the models and provide us a great opportunity to analyze spatial data by using spatial models and create a map display output, which makes the spatial allocation problems clear and direct the planner to reasonable regional planning. We compared the three classes of the models in ARC/INFO GIS environment and discuss the benefits and limitations of the models using data from a part of Khorasan Province of Iran.