

A Study on Effective and Rational Planning of Regional Solid Waste Management System

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Recently the purpose of waste management system has been changed on the keyword "recycling". So we must construct waste management system afresh.

But it is too expensive to realize the high technology facilities. So it is important that the new management system could be cooperated in a large area. So, first, I described about mathematical model about burden rate of expense about waste management system among cities. To solve this model, I used Game Theory.

And, I developed the planning models as a tool of creating a desirable waste management system including recycling. I developed model of prediction of amount of waste, and waste collection model to search for the most suitable transportation route and the cost and model of planning of waste management facilities. To solve this model I used Maximum Principle, and objective function is the amount to landfill and the total cost against waste management.

And I studied about residents' agreement in planning of waste management facilities. I analyzed factors of objection to building of waste management facilities and I developed a model to estimate the degree of agreement to waste management facilities.