

An Input-output Model of wastewater Treatment

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Abstract

This paper proposes a new hybrid input-output model designed to analyze both wastewater and wastewater treatment. This model, named wastewater treatment input-output model (WWIO), can be regarded as an extension of the waste input-output model (WIO). In this paper the traditional input-output table is extended by adding k column sectors to represent k treatment processes and by adding l rows to represent l types of waste related to wastewater. As an application, I compiled the Tokyo Metropolitan WWIO table for 2000. This table is composed of 483 economic sectors, 10 wastewater treatment sectors, 12 types of waste related to wastewater and 4 kinds of environmental load. To compare alternative wastewater treatment systems, the model was then applied to scenario analysis.