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COMPREHENSIVE EVALUATION OF ENVIRONMENTAL POLICIES FOR SUSTAINABLE DEVELOPMENT IN JIAXING CITY, CHINA

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Abstract

Recently, various environmental problems have been introduced with the rapid economic development and population growth in China. It is important to enforce optimal environmental policies to achieve economic development along with environmental improvements. In this study, we selected the city of Jiaxing for our research area due to its high water pollution and its fast economic growth, and we constructed a comprehensive environmental policy evaluation model to elucidate the optimal development proposals for local sustainable development. The optimization simulation model includes a water pollutant reduction model and a socioeconomic model; it can evaluate the feasibility and efficiency of the environmental policies based on the consideration of environmental preservation and economic development. Established using dynamic programming in LINGO, simulation results proved that a comprehensive environmental policy with biomass plant construction is the best choice to achieve the research targets. This study can provide information like specific policy initiatives to improve the trade-off between environment and economic in Jiaxing city, China.

Key words: dynamic programming, environmental policy, optimization simulation, water environment

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