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Wasted Paradise? Policies for Small Island Developing States to Manage Economic Growth while Preserving Environmental Quality: The Case of the Maldives

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Short Summary of Paper

Small Island Developing States (SIDS) face tension between economic growth and environmental impact (Stauvermann and Kumar, 2016; UNWTO, 2016). Tourism fuels growth (Stauvermann and Kumar, 2016; UNWTO, 2016), but the resulting solid waste and other pollutants threaten the SIDS' natural beauty, quality of life for residents, attractiveness to tourists, and economic success (Sealey and Smith, 2014; Sullivan-Sealey and Cushion, 2009). We assess the tension between tourism-driven economic growth and environmental degradation from a limits-to-growth perspective (Forrester, 1968), developing a generic system dynamics model of the problem using 38 years of data from the Maldives (Government of the Maldives, 2017) to estimate parameters and Monte Carlo methods to assess the sensitivity of results to uncertainty. We contrast development paths for the next three decades under three sets of policies focusing on promoting growth, managing tourism demand–supply balance, and improving waste management. Findings are counterintuitive; policies focused on better waste management alone are self-defeating, because they increase tourism, growth, and waste generation, undermining attractiveness and growth later. Policies that limit tourism demand improve economic and environmental health.

Keywords

Waste management, system dynamics, model calibration, ecological sustainability, economic growth, tourism management, limits to growth, small island developing states

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