

MIT-Zaragoza Speaker Series

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Zaragoza Logistics Center, Lecture Hall
Zaragoza, Spain



Wasted paradise? Policies for Small Island States to manage tourism-driven growth while controlling waste generation: the case of the Maldives.

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Abstract:

Small Island Developing States (SIDS) face tension between economic growth and environmental impact. Tourism fuels growth, but the resulting solid waste and other pollutants threaten the SIDS' natural beauty, quality of life for residents, attractiveness to tourists, and economic success. We assess the tension between tourism-driven economic growth and environmental degradation from a limits-to-growth perspective, developing a generic system dynamics model of the problem using 38 years of data from the Maldives 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.

About the Speaker:

Paulo Gonçalves is Professor of Management at the Università della Svizzera italiana (USI) and Founder and Director of the Master of Humanitarian Logistics and Management (MASHLM). He is also a research affiliate at the MIT Sloan School of Management. He holds a Ph.D. in Management Science from MIT Sloan and a M.Sc. from MIT. He received the Intel Foundation Graduate Research Fellowship Award (2003) and the 2004 Doctoral Dissertation Award by the Council of Supply Chain Management Professionals (CSCMP) for his dissertation. His research combines system dynamics simulation, experiments, econometrics, and optimization to understand how managers make strategic, tactical and operational decisions in humanitarian settings. His current research focuses on developing supply chain experiments to understand and improve procurement, pre-positioning, inventory, and resource allocation decisions in humanitarian settings. He has published in the areas of supply chain management, behavioral operations, and system dynamics. His publications appeared in *Production and Operations Management*, *System Dynamics Review*, *European Journal of Operations Research*, *Journal of Business Logistics*, *Journal of Humanitarian Logistics and Supply Chain Management*, *Socio-Economic Planning Sciences*, *Sloan Management Review* and *California Management Review*.