



Managing Sustainable Food Systems

by

Prof. Dan Andrei IANCU

Stanford Graduate School of Business

Date : **11 February 2026 (Wednesday)**

Time : **10:30 – 11:45 AM**

Venue : **Case Room G003, G/F, LSK Business Building**

Abstract: We discuss a set of problems arising in the management of global food systems where technology and data analytics combined with operational innovations and incentives can lead to substantial improvements. The first part of the talk focuses on the issue of tropical deforestation associated with the supply of agricultural commodities such as palm oil, cocoa, or coffee, which causes alarming CO₂ emissions and loss of biodiversity and ecosystem services. To prevent this, governments and multinational commodity buyers are offering positive incentives for local communities conditional on preventing deforestation in a specified area. We propose and analyze alternative weaker conditions related to preventing the use of timber or cleared land for economic purposes. To compare various incentive schemes, we propose a new robust solution concept for cooperative games with externalities and use it to characterize the best condition and the feasible incentives that prevent deforestation and compensate local community members for missed economic opportunities. We then leverage this framework to determine whether conditional price premiums for palm fruit would successfully prevent deforestation in the Indonesian palm oil supply chain. Using survey data from 58 villages in East Kalimantan and robust data envelopment analysis, we find that the Roundtable on Sustainable Palm Oil (RSPO) price premium is too low, but moderate price premiums combined with our novel conditions would prevent deforestation in most villages and would be remarkably robust to entry by outsiders. The second part of the talk considers problems related to food retail, and more specifically the management of perishable foods prepared in stores. We show how retailers that optimize their operational policies -- optimally choosing the shelf life of products, the issuance rule, the price, and whether to add timestamps that inform customers about the age of products -- can successfully boost profit as well as increase customer welfare and reduce food waste.

Bio: Dan A. Iancu is an Associate Professor of Operations, Information, and Technology at the Stanford Graduate School of Business. His research interests are in responsible analytics/AI and data-driven optimization under uncertainty, with applications in global supply chain management, FinTech, and healthcare. His methodological work develops robust, simple, and fair tools for decision-making, and his applied work tries to design more effective, more equitable, and more sustainable solutions for complex

operational problems. His research has been published in the top journals in the field and awarded best paper awards from several INFORMS societies. He currently serves on several editorial boards, including as Area Editor for Optimization at Operations Research. Before Stanford, he was a Goldstine Fellow at IBM T.J. Watson and earned degrees from Yale, Harvard, and MIT.

All interested are welcome!
Enquiries: Dept of ISOM