Special Issue: Sustainable Freight Transportation for Perishable Items

Guest Editor of the Special Issue:
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Background and Proposed Theme:
A substantial rise in freight traffic has contributed in 3 percent of global CO₂ emissions (Marquez-Ramos, 2015). Subsequently, “Sustainability” in freight transportation facilitates an optimal trade-off among economic, environmental and social practices and establishes a “win-win” ecological as well as economic frameworks and policy mechanisms (Zheng et al., 2016). Recent research on sustainability and freight transportation operations have focused on Triple Bottom Line (TBL) (Beske and Seuring, 2014) that balances economic, environmental and social perspectives. Achieving sustainability in the freight operations requires paradigm shift from conventional operations towards transformative process innovation. Reverse logistics, route optimization, technology driven processes, multi-modal freight transportation, carbon emission monitoring and sustainable performance measurement are some of the key sustainable practices (Mathivathanan et al., 2017; Bai et al., 2012).

Among all commodities, delivering perishable products is relatively complex as it is characterized by dynamic demand with finite shelf-life (Nahmias, 2011). Thus, the product quality is to be maintained throughout the process until it reaches the last stage of transportation. Therefore, perishable products are highly energy intensive products that need to be refrigerated at all times (Glover et al., 2014). Integrating sustainability while delivering perishable goods would require innovative and reliable solutions. Sustainability minimizes waste and maximizes value of perishable products by facilitating fast movement of goods through intense coordination among various stakeholders, First-in-First-Out (FIFO) inventory management, tracking & tracing technologies such as barcodes, radio frequency identification (RFID) and recycling the wastes generated throughout the processes (Govindan, 2017; Beske et al., 2014).

Although sustainable freight transportation and perishable supply chain are separately researched in the past, there is a knowledge gap in the combinative research areas to comprehend benefits of integrating sustainability in transportation of perishable products. This special issue of the OPSEARCH would cover all aspects of sustainable freight transportation and/or logistics activities for perishable products using empirical and theoretical frameworks, mathematical models and decision making techniques.

This special issue seeks to publish original manuscripts that addresses research questions related to integrating sustainability in perishable supply chain including but are not limited to the following:

• How does sustainability thinking can be integrated in the logistics of perishables products maintaining optimal trade-offs among the three dimensions of TBL?
• How the key sustainable freight transportation constructs differ in case of perishable products as compared to other products?
• How implementing sustainability approaches assist in making delivery of perishable products greener, efficient and responsive?
• What are the role of various challenges and barriers in integrating sustainability in the logistics of perishable products during decision-making on strategic, tactical and operational level?

Scope and Topics:
The scope of this OPSEARCH Special Issue on “Sustainable Freight Transportation for Perishable Items” covers all aspects of design and analysis of sustainable logistics and/or perishable products supply chain including but are not limited to:

• Mathematical modeling, multi-objective optimization and simulations for re-structuring the perishable supply chain
• Decision Support System for various sourcing strategies and performance assessment of sustainable freight transportation for perishables
• Application of various Decision Theories and Multi-criteria/Multi-attribute decision making Methodologies in reducing wastages at various phases of sustainable perishable supply chain
• Sustainable Risks Assessment and Mitigation for Perishable Supply Chains
• Future generation Green Information and Communication Technologies (ICT) and Intelligent Freight Transportation system
• Cognitive Computing and algorithms for real-time tracking and tracing of perishable products and monitoring sustainability
• Sustainability Analytics and data driven methodologies for planning, designing and controlling sustainable processes
• Empirical studies, exploratory studies and qualitative frameworks for facilitating sustainability in perishable supply chain

**Submission Details:**
Submission site: [https://www.editorialmanager.com/opse/](https://www.editorialmanager.com/opse/)
Submission deadline: December 31, 2017
Review reports: March 31, 2018
Revised paper submission: April 30, 2018
Final manuscript submission to publisher: May 31, 2018
Online publication of special issue: June 30, 2018

**Submission Procedure:**
• All submissions must follow the editorial guidelines of Journal OPSEARCH, which can be obtained from the journal website.
• Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere.
• Each manuscript submitted will be initially screened to determine its suitability for this special issue.
• Each manuscript will be refereed for publication by at least two reviewers with regard to relevance, originality, and research quality in order to guarantee the highest possible quality.
• Papers should only be submitted via the submission site mentioned above.

**References**