Guest editorial

EQ&OR: environmental quality and operations research

The rapid climate change and global warming forced the industries to rethink its business operational strategy from an environmental quality perspective. Over the last decade, the carbon trading concept emerged, which to a great extent forced business organizations globally to shift from traditional operations and production into an eco-friendly one, i.e. environmentally sustainable operations to manage the environmental quality. The special issue contains 11 papers accepted through the rigorous reviewing process that can be used for future research as well as teaching aids to demonstrate the applicability of environmental quality in real practice. Following paragraph briefly provides an overview on each paper.

The paper by Nenko and Marina advocated on urban emptiness as a resource for sustainable urban development. The paper describes urban emptiness as a resource in urban development and gives recommendations on how to account for it in sustainable urban environment management. The paper by Sandeep Gupta is a case study which presents an example of sustainable practices and their benefits to the Indian leather industry. The case study analysis is based on qualitative and quantitative methodologies, and shows that the leather industry has successfully recycled and converted tannery scraps and other waste into organic manure for internal use in its own plantations. Similarly, another paper by Sandeep Gupta talks about the pollution prevention. The paper suggests that the pollution prevention is the key to drive sustainability in the leather industries located in India. Another paper by Rajesh Kumar Singh and Saurabh Agrawal aims to explore the product disposition strategies in reverse supply chains considering environment and to develop a framework to prioritize these strategies for effective reverse supply chain implementation. The results of the study show that dissemble and recycle is the most preferred disposition strategy for the firm. The paper by Aarti Singh, Sushil and Surya Prakash Singh derives a hierarchical relationship of factors using a qualitative method, i.e. total interpretive structural modeling (TISM) for fly ash handling technologies. Fly ash being an important waste of a thermal power plant hugely affects environment if the handling process is not an efficient one. The paper provides the driving factors that should be considered while designing future handling technologies for fly ash handling. Similarly, the paper by Ankur Chauhan and Amol Singh identified and modeled the drivers for healthcare waste management using qualitative technique, i.e. TISM. They identified the factors from healthcare waste management department of various hospitals, through survey from healthcare professional and published literature. The paper by Harpreet Kaur and Surya Prakash Singh on environmentally sustainable stochastic procurement model proposes a quantitative model to optimize the total procurement cost for a business organization. The proposed model takes care of the stochastic demand fluctuation and other parameters while optimizing the carbon emissions to the environment while keeping the other cost parameter minimum. The paper by Sumer Singh, P.V.M Rao and Jyoti Kumar provides a framework for environmental impact assessment for product packaging. They considered various factors obtained through questionnaires from packaging industry experts. The paper by Gahana Gopal C., Yogesh B. Patil and Shibin K.T. provides a conceptual framework for the drivers and barriers of integrated sustainable solid waste management. The paper makes use of a qualitative multi-criteria approach, namely TISM. The paper provides some of the drivers and barriers for sustainable solid waste management. The paper by Hafeez Agbabiaka and co-authors studies the dumpsites and its pollutants. This study focuses on the effect of dumpsites and various associated pollutants

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on the groundwater. Similarly, another study by Hafeez Agbabiaka and co-authors focused on a solid waste management practice in Obafemi Awolowo University Teaching Hospital (OAUTHC) ILE-IFE, Nigeria. The study provides a real case on solid waste management in a hospital located in Nigeria.

Finally, the Guest Editor does believe that these papers would make considerable contributions to the body of knowledge. Also, the Guest Editor thanks all the authors for their contribution.

Surya Prakash Singh
Indian Institute of Technology Delhi, New Delhi, India

About the Guest Editor

Surya Prakash Singh, Guest Editor, is an Associate Professor in the Department of Management Studies, Indian Institute of Technology (IIT) Delhi, India. He holds a PhD Degree from IIT Kanpur. He is also a Postdoctoral Fellow from the NUS Singapore-MIT USA alliance. He mainly works in optimization. Currently, he is focused on optimization through sustainable approaches primarily concerned with environment. In addition to this, his research interest includes facility layout/location problems, sustainable procurement, flexible supplier selection, flexible and sustainable operations, big data analytics, developing heuristics and meta-heuristics approaches. His research works have been published in leading international journals such as *International Journal of Production Research, Lecture Notes in Computer Science, International Journal of Advanced Manufacturing Technology, Annals of Operations Research, Computers and Operations Research, International Journal of Logistics Management, Sustainable Production and Consumption, Production Planning and Control, Expert System with Applications, Food Control, Management of Environmental Quality, International Journal of Quality and Reliability Management, Global Journal of Flexible Systems in Management, Benchmarking: An International Journal, International Journal of Energy Sector Management, and Asia Pacific Management Review*. More than 130 papers of the Guest Editor have been so far published at various international journals and conference proceedings of repute. Recently, he has been awarded Young Outstanding Faculty Fellowship from IIT Delhi. Surya Prakash Singh can be contacted at: surya.singh@gmail.com