

# Advances in life cycle analysis, econometrics, optimization, R&D policy, and health decision making

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The September issue of *Environment Systems and Decisions* contains articles that cover an interdisciplinary spectrum of topics (e.g., climate change, human health, research policy) and methodological innovations (e.g., life cycle assessment, econometrics, optimization).

The issue opens with a review article exploring governance implications for environmental and occupational health associated with pesticide use (Shammi et al. 2017). Next, Abrahams et al. (2017) use cost and life cycle greenhouse gas emissions data to optimize the global trade network for crude oil. Fatorić et al. (2017) document stakeholder perceptions related to effects of climate change risk on employment and migration. Next, a mixed integer programming model is presented for the optimization of multiple economic, social, and environmental objectives in municipal solid waste site selection (Yu and Solvang 2017). Macnee and Tokai (2017) describe a method for calculating health impacts including cardiovascular disease and disaster-related injuries attributed to climate change. The energy efficiency and cost-effectiveness of photovoltaics is assessed when considering the tilt angles of the panels as well as synergies with other roofing types (Statler et al. 2017). With a multi-criteria decision model, Loc et al. (2017) evaluate the benefits of various urban flood control alternatives. Islam et al. (2017) document the prevalence of arsenic in the food chain and assess the health risks from

ingestion of various foods. Econometric methods are employed by Magazzino (2017) to investigate the relationship between economic growth of nations, their energy consumption, and greenhouse emissions. Finally, Keisler et al. (2017) develop and demonstrate a decision model that can be used to allocate research funding to scientists.

For the Springer journal *Environment Systems and Decisions*, the recent release of Google Scholar's (<https://scholar.google.com/>) metrics indicate positive trends. The h5-index for *Environment Systems and Decisions* rose to 16 (from 14 the previous year), and the h5-median is 24. Additionally, of all journals with the word “Decision” in the title, *Environment Systems and Decisions* is ranked 16th. This shows an upward trajectory in the impact of the research and case studies that have been published in the journal in the recent four years.

Upcoming issues of interest in *Environment Systems and Decisions* include (1) Brunswik's theory of probabilistic functionalism, (2) food security, (3) resilience in socio-technical systems, and (4) emerging technologies.

Finally, in coordination with the Society for Risk Analysis (<http://www.sra.org/>), in particular the SRA Decision Analysis and Risk Specialty Group (DARSG), the ESD Editorial Board is pleased to announce the annual ESD Best Paper Award for innovative advancement in the theory and practice of decision analysis, systems engineering, and related topics. The DARSG has nominated three abstracts from the upcoming SRA annual meeting, which are invited to submit full-length manuscripts to *Environment Systems and Decisions*. Manuscripts will be evaluated by the President of the DARSG and the Editorial Board to select the Best Paper(s). The winner(s) of the Best-Paper Award will share \$500. Each accepted paper will be eligible for expedited online and print publication in an upcoming issue.

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