

Editorial Note: Decision Making in Resource Management: Exploring Problems, Methods, and Tools

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1. Introduction

The field of resource management plays a crucial role in addressing the complex challenges of allocating resources within societal frameworks while considering ecological, legal, and practical considerations. This editorial note introduces a special issue titled “Decision Making in Resources Management: Problems, Methods, and Tools,” dedicated to the 17th edition of the ICABE conference. The issue aims to shed light on various aspects of decision-making in resource management, including theoretical, methodological, practical, ecological, and legal considerations.

2. Resource Management and Its Significance

Resource management involves the allocation of resources based on the needs, aspirations, and desires of individuals within societal frameworks. It encompasses a wide range of factors, such as technological advancements, political and social institutions, and legal and administrative arrangements. It is a conscious process that requires judgment, preference, commitment, and sustainability. The primary goal is to achieve desired outcomes from a limited set of perceived resource combinations via various managerial, technical, and administrative alternatives. The resources encompass financial resources, inventories, human skills, production resources, information technology (IT), managerial capabilities, and natural resources. The decision-making process in resource management offers extensive opportunities for scientific investigation, challenges, and innovations.

3. Focus of the Special Issue

This special issue aims to explore the methods and tools that support decision-making in resource management and facilitate data acquisition for decision-making purposes. The areas of interest include but are not limited to multi-criteria decision analysis (MCDA), operational research methods, multidimensional comparative analysis (MCA), modeling and computer simulation, artificial intelligence, econometric and statistical methods, neuroscience techniques, focus group interviews (FGI), individual in-depth interviews (IDI), data text mining, IT tools, decision support systems, computer games, virtual reality, and other relevant methods and tools.

4. Articles Included in the Special Issue

Following a rigorous evaluation process, eight articles directly related to the subject matter of this special issue have been published. Each article contributes valuable insights to the field of decision-making in resource management.

1. Ojaghloou, M., et al. [1] examines the relationship between CO₂ emissions, energy consumption, economic activities, and management issues in Turkey. The findings



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- suggest a long-term relationship between economic expansion, energy consumption, and CO₂ emissions, highlighting the implications for environmental degradation.
2. Sibanda, K., et al. [2] investigates the connection between human capital and environmental sustainability in the Southern African Development Community (SADC) countries. The study finds a positive contribution of human capital to environmental sustainability, emphasizing the need to prioritize programs that enhance human capital for the region's environmental well-being.
 3. Ransikarbum, K., et al. [3] addresses the environmental challenges related to the sourcing decision for a hydrogen supply chain in Thailand. The study utilizes an integrative MCDA tool to assess weighted criteria and sourcing alternatives, with political acceptance identified as the most significant criterion in Thailand.
 4. Guzmán-Romero, D., et al. [4] presents a model for determining the optimal location and sizing of photovoltaic (PV) generators in distribution networks. The proposed framework demonstrates the effectiveness and robustness of the optimization methodology, offering a comprehensive approach to minimize the total annual operating costs of the system.
 5. Gisladdottir, J., et al. [5] highlights the importance of understanding the regulatory frameworks and policy instruments that promote sustainable management of natural resources. The article proposes a process-oriented and interdisciplinary approach using qualitative system dynamics to bridge knowledge gaps and generate new questions about corruption in natural resource systems.
 6. Thalassinou, E., et al. [6] discusses the significance of natural gas as a transitional energy source and its impact on GDP. The study finds a long-run relationship between natural gas consumption, population, CO₂ emissions, and GDP in selected G20 countries, emphasizing the need for effective management and planning in natural gas usage.
 7. Kabus, J., et al. [7] explores the use of outsourcing as a strategy for manufacturing companies to enhance their competitive advantage. The study identifies common areas of outsourcing in Polish manufacturing companies and examines the determinants influencing the choice of an outsourcing operator.
 8. Jedliński, M., et al. [8] highlights the benefits of considering the total cost of ownership (TCO) in the context of wooden pallets. The article demonstrates how TCO analysis can significantly reduce logistic costs for enterprises, supporting sustainable development.

5. Conclusions

The articles presented in this special issue contribute valuable insights and advancements in the field of decision-making in resource management. They cover a wide range of topics, including theoretical aspects, practical problems, and the utilization of various methods and tools. The editors extend their appreciation to all the contributors for their valuable research and insights, which deepen our understanding of decision-making in resource management.

Conflicts of Interest: The authors declare no conflict of interest.

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