

Digitizing Carbon Footprints Management

Guest Editor:



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Special Issue Introduction:

Managing greenhouse gas emissions from anthropogenic sources has been a critical concern since the beginning of the industrial revolution. To harness emissions from various business and societal activities carbon footprint management—in the broadest sense—needs to be carefully managed.

Carbon footprints are metrics that are required for various performance measurement systems—these systems can be at the individual, household, organizational, supply chain, regional, national, and even global level. To effectively manage carbon footprint metrics and measures requires systems, these systems may be effectively managed through various digital and digitally related technologies.

Evolving digitalization technologies can be viewed as multi-stakeholder technologies that can effectively get access to and provide access for many actors in our society and business systems. Appropriate design, implementation, and operations of these technologies means better planning, monitoring, collaboration, information sharing, and hopefully, improvement in carbon emissions and footprints management.

Alternatively, poor use and application of these technologies may actually increase carbon footprints of users, provide inaccurate information leading to greenwashing, and even limit inclusivity of actions and put some groups at a disadvantage. Thus, careful investigation and research is needed for appropriate and optimal use of digitalization for carbon footprint management. Thus, the call for papers to help researchers, practitioners, and learners understand the complexities and nuances of this topic.

- The design of carbon footprint management systems for organizations, supply chains, and industries.
- Standards and considerations for data management and technology for carbon footprints.
- The design and use of multistakeholder digital technology, including blockchain technology, the internet-of-things, cloud computing, global positioning systems, and artificial intelligence to address various carbon footprint management concerns.
- Using digital technology under various regulatory and institutional schemes for effective carbon footprint management.
- How to achieve net-zero or carbon neutrality for organizations, supply chains, and even broader entities such as cities and industries using digital technologies.
- The linkage of environmental, social, and governance (ESG) metrics to carbon emissions and footprints through the use of digital technologies.
- The dark-side of digital technologies from social, environmental, and economic perspectives when considering their use in carbon footprint management.
- Building education, knowledge, and expertise—the role of society in the use of technology for social good and linkages to carbon performance management.
- Analytical models to aid digital technologies support smarter footprint decisions.
- Practical case studies to inform scientists, researchers, policy makers and practitioners in any of these topical areas.

Benefits to Authors:

- Ten articles in the Special Issue are exempt from article processing charges;
- Enjoy faster publication than regular submissions;
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