

REVIEW

Open Access



# Trending research topics on carbon footprint and supply chains: a bibliometric analysis based on the Scopus data (2019–2023)

Ismail Abdi Changalima<sup>1\*</sup>, Prisca Pascrates Rutatola<sup>2</sup> and Goodluck Goldian Ntangeki<sup>3</sup>

## Abstract

This study analyzes the publication trend, most active contributors, most influential publications and trending research topics on the current context of carbon footprint and supply chains. The study conducted a bibliometric analysis of 809 documents retrieved from Scopus, published between 2019 and 2023, to identify trends, contributors, top publications, and trending topics. With the help of Harzing's Publish or Perish and VOSviewer, the study employed performance analysis and keyword co-occurrence analysis. The study reveals an upward trajectory in the number of publications in this research domain. Additionally, the study identifies several themes through keyword co-occurrence analysis, including "the application of regulatory mechanisms and game theory in carbon emission reductions," "strategies and mechanisms for enhancing low-carbon initiatives within supply chains," "the development and optimization of sustainable supply chain systems to reduce carbon emissions," "the use of simulation and optimization models for CO<sub>2</sub> emission reduction in supply chain and logistics operations," "financial legislation and mechanisms for improving carbon emission reductions," "the impact of logistics and supply chain operations on carbon emissions and climate change," and "the carbon footprint in supply chains and cold chain logistics operations." This review emphasizes the need of adopting low-carbon technologies to enhance sustainable practices within supply chains. The study highlights the role of advanced technologies in efforts linked to carbon reduction. The study also advocates for a multifaceted policy approach, including encouraging innovation, and implementing financial mechanisms to reduce carbon emissions, especially in logistics and supply chain operations.

**Keywords:** Carbon footprint, Carbon emission, Supply chains, Sustainable supply chain, Low-carbon supply chain, Bibliometrics

## Introduction

Over the past years, environmentalists, academics, and various stakeholders have increasingly focused on environmental impacts and climate change concerns. This is intriguing as the negative impact on the environment

affect biodiversity and human operations on Earth. It has been reported that carbon emissions account for the largest portion of global emissions [1, 2]. Despite efforts being made to address this issue, academics continue to express concerns. Their concerns show that environmental aspects need to be more focused on with efforts from the government, customers, and businesses [3–10]. This triggers aspect related to carbon footprint, which refers to the overall quantity of greenhouse gases, mainly carbon dioxide, released directly or indirectly through human activities [11]. Measuring and managing carbon emission is crucial for reducing environmental impacts and addressing climate change [12–15].

\*Correspondence:  
Ismail Abdi Changalima  
changalima@gmail.com

<sup>1</sup> The University of Dodoma, Dodoma, United Republic of Tanzania

<sup>2</sup> The Local Government Training Institute, Dodoma, United Republic of Tanzania

<sup>3</sup> College of Business Education, Dar Es Salaam, United Republic of Tanzania

# Carbon Footprint Trending

**G Thomas**



## **Carbon Footprint Trending:**

**Ecological Economics Research Trends** Carolyn C. Pertsova, 2007 This new book presents important research in the field of ecological economics which is a trans disciplinary field of academic research that addresses the dynamic and spatial interdependence between human economies and natural ecosystems Ecological economics brings together and connects different disciplines within the natural and social sciences but especially between these broad areas Ecological economics presents a more pluralistic approach to the study of environmental problems and policy solutions characterised by systems perspectives adequate physical and biological contexts and a focus on long term environmental sustainability *Future Trends in Modern Plastics* Johannes Karl Fink, 2024-04-02 Future Trends in MODERN PLASTICS The prolific author and polymer scientist discusses the current topics in the plastics industry and recommends future research in sustainable polymers and the recycling routes of plastic waste The book opens with a chapter discussing newly developed monomers such as alkylene based monomers epoxide monomers diol based monomers bio based monomers and several other types Modern polymerization methods are then explained such as ionic polymerization plasma polymerization and ring opening polymerization The book moves on to special issues and some future trends in the plastics industry with recommendations for future research Plastics have given society enormous benefits because of their versatility light weight durability and low costs However these properties have come with negative impacts because these persistent materials are leaked into the environment during their entire life cycle Therefore critical chapters report on the future directions for sustainable polymers the valorization of plastic waste and the recovery treatment and recycling routes of plastic waste The book concludes with chapters on the usage of plastics in medical devices as well as the use of plastics in restoration food applications additive classes and manufacturing Audience The book will be used by plastics engineers chemists polymer and materials scientists in both academia and the plastics industry *Current Trends in Environmental Psychology, volume I, 2nd edition* Giuseppe Carrus, Eugenio De Gregorio, Frederica Caffaro, Sabine Pirchio, Lorenza Tiberio, 2023-07-18 This Research Topic is linked to the 3rd International Conference of Environmental Psychology ICEP 2021 to be held in Siracusa Italy 4 9 October 2021 The ICEP is one of the most important scientific events in the global community for experienced scholars junior researchers and professionals working in the field of Environmental Psychology across the world Submissions to this Research Topic welcome but are not limited to works that have been presented on site and virtually at the ICEP 2021 Research Topic articles will be published immediately once accepted in the journal This Research Topic aims to promote the scientific debate over the most recent empirical findings and theoretical advances in Environmental Psychological science and to build evidence based knowledge and innovative approaches to understand the relationship between humans and their socio physical environments It aims at hosting empirical and theoretical works that contribute at advancing our scientific knowledge on some of the most urgent challenges of contemporary human society **RECENT TRENDS IN CHEMICAL SCIENCES AND**

**ENVIRONMENTAL SCIENCE** Dr. Azad Kumar, Dr. Rajesh Kumar Singh, Dr. Yashvant Rao, 2021-11-18 Our intention in publishing this book was to discuss and interpret all of the major issues in the chemical and environmental science disciplines because this book covers such a broad range of chemical and environmental science research areas. Rather, we have selected the themes and challenges, briefly defined them, and demonstrated how they connect, clarified the terminology, and indicated where further research may be accessed. We hope that the result is an excellent introduction to chemical and environmental science. It is primarily aimed towards researchers in chemical science and related fields, but it should be accessible to new researchers as well. We have explored, in more depth, on issues that have received little attention elsewhere. There are several useful sources for topics such as chemical science, environmental science, nanotechnology, ionic liquids, solid waste management, photodegradation, Nanomaterial adsorption of hazardous metals, and conducting polymers. However, we attempted to provide up to current knowledge; we are well aware that books may soon go out of date if they seek to provide too much detail, so we concentrated on basic concepts that should not go out of fashion too quickly. Our book differs somewhat from other texts in the chemical and environmental sciences in its concentration. We have focused on ideas and theories because we feel that a solid grasp of them will be more useful in the long run than specifics of present systems, services, and approaches. We have also highlighted the dimension since we feel it is critical to understand where the discipline and its components originated from and why some things are the way they are. This approach is based on the research with several references provided at the end of each chapter for convenience. Our intention is that the content of this book will be sufficient to provide a fundamental knowledge of the entire field and that readers will refer to the references for more information and examples of the parts of which they are most interested. The conclusion words and captions, as well as the important references at the conclusion of each chapter, are intended to present the main points in a factual way.

**Environmental and Economic Impacts of Decarbonization** Óscar Dejuán, Manfred Lenzen, Maria Ángeles Cadarso, 2017-07-31 On December 12th, 2015, at the United Nations Conference on Climate Change held in Paris, 195 countries adopted the first ever universal and legally binding climate deal. They agreed to decarbonize the economy in order to hold the increase in the global average temperature to well below 2°C relative to the preindustrial levels. Although each country is free to design its own strategy on mitigation and adaptation, it will be bound to such strategy and is supposed to implement the bulk of the adjustments by 2050. Many questions arise from the Paris Agreement that point to a second Industrial Revolution. What are the required changes in the structure of production and in the patterns of consumption? What will be their impacts on emissions, employment, and international trade? This book answers these questions from a variety of input-output models able to compute the impacts on specific sectors and regions. This volume has 17 chapters written by 52 co-authors who are specialists in input-output analysis and environmental sustainability. They come from 24 universities, research centers, and international agencies all over the world, sharing their commitments to explain important and complex

ideas in a way that is understandable to the non experts and experts alike Environmental and Economic Impacts of Decarbonization is a very important read for those who study environmental economics climate change and ecological economics

*Sustainability as a Trend in Fashion Industry. An Empirical Study about Changing Consumer Behaviour* Dagmar Cyrklaff,2017-06-14 Master s Thesis from the year 2017 in the subject Business economics Offline Marketing and Online Marketing grade 1 7 University of Applied Sciences Berlin course International Marketing language English abstract A trend in society to take care of environmental issues is observed and the generation born around the millennium shift between 1980 and 2000 so called generation Y became a growing consumer market in Germany Fashion is one of the most consumed segments by the Millennials who value transparent production and are sensitive to environmental issues at the same time This study seeks to provide a current status of the generation Y s knowledge attitude and behaviour in regards to fashion consumption with the impact of sustainability A literature review and an online survey have been conducted to analyse the consumer behaviour of 84 Generation Y consumers aged 17 to 37 in 2017 The major result shows that there is no significant difference in attitude and behaviour towards a sustainable development between consumers that live a conscious life and conventional consumers Sustainability as a topic has reached Millennials who should further deepen their knowledge in order to foster a sustainable development in fashion

**How to Reduce Your Carbon Footprint** Joanna Yarrow,2008 How to Reduce Your Carbon Footprint is the world citizen s guide to pushing back the advance of global warming This colorful handbook offers 500 practical easily achievable ideas that conserve energy prevent pollution and save money Did you know that unplugging appliances and cell phone chargers when not in use can reduce electricity bills by 10 percent Or that recycling just one glass bottle saves enough power to run a computer for 30 minutes Whether the subject is jet travel dish washing or any of the 50 topics in the book surprising statistics and innovative graphics will inspire action and demonstrate that simple habits can lead to big results Amazon com

*Green Trends in Mechanical Engineering* S.R. Jayaram,Lingappa M. Shashank,Y. M. Shashidhara,M.S. Srinath,2019-11-01 International Conference on Green Trends in Mechanical Engineering Sciences ICGTMES Selected peer reviewed papers from the International Conference on Green Trends in Mechanical Engineering Sciences ICGTMES October 3 5 2018 Karnataka India

**Global Trends in Sustainable Energy Investment** ,2010 The report provides an overview of capital flows and an analysis of the trends in sustainable energy investment activity

**Kenya T21 Model** Kenya. Ministry of State for Planning, National Development, and Vision 2030,Kenya. Ministry of Environment and Mineral Resources,2012

**2012 Natural Gas Market Trends** Leon D. Brathwaite,2012

*2017 Natural Gas Market Trends and Outlook* Melissa Jones,2018

**Social Trends** ,2010 *National Coffee Drinking Trends Through ...* ,2010

*Minnesota Economic Trends* ,2009-12 *Trends magazine* ,1988 *The Massachusetts register* ,2013

**2016 Regional Trends Report** Jun Tian (Economist),Sean Ratka,Kimberly Roseberry,2016 The 2016 Regional Trends Report on Energy for Sustainable Development in Asia and the Pacific supports

the implementation of the SDG7 and outcomes of the Asian and Pacific Energy Forum 2013      **The Trend Toward**  
**Osteopathy** Ray G. Hulburt,1927      *HR from the Outside In: Six Competencies for the Future of Human Resources* David  
Ulrich,Jon Younger,Wayne Brockbank,Mike Ulrich,2012-07-17 HR from the Outside In provides the concepts and tools HR  
professionals need to excel in six critical competencies strategic positioner credible activist capability builder change  
champion HR innovator and integrator and technology proponent The book shows readers how to establish powerful  
strategies and structure an HR department so that the department delivers long term value to the organization

Uncover the mysteries within Crafted by is enigmatic creation, Embark on a Mystery with **Carbon Footprint Trending** . This downloadable ebook, shrouded in suspense, is available in a PDF format ( PDF Size: \*). Dive into a world of uncertainty and anticipation. Download now to unravel the secrets hidden within the pages.

<https://thebrandexperience.com/book/book-search/default.aspx/Virtual%20Collaboration%20Advanced.pdf>

## **Table of Contents Carbon Footprint Trending**

1. Understanding the eBook Carbon Footprint Trending
  - The Rise of Digital Reading Carbon Footprint Trending
  - Advantages of eBooks Over Traditional Books
2. Identifying Carbon Footprint Trending
  - Exploring Different Genres
  - Considering Fiction vs. Non-Fiction
  - Determining Your Reading Goals
3. Choosing the Right eBook Platform
  - Popular eBook Platforms
  - Features to Look for in an Carbon Footprint Trending
  - User-Friendly Interface
4. Exploring eBook Recommendations from Carbon Footprint Trending
  - Personalized Recommendations
  - Carbon Footprint Trending User Reviews and Ratings
  - Carbon Footprint Trending and Bestseller Lists
5. Accessing Carbon Footprint Trending Free and Paid eBooks
  - Carbon Footprint Trending Public Domain eBooks
  - Carbon Footprint Trending eBook Subscription Services
  - Carbon Footprint Trending Budget-Friendly Options
6. Navigating Carbon Footprint Trending eBook Formats

- ePub, PDF, MOBI, and More
  - Carbon Footprint Trending Compatibility with Devices
  - Carbon Footprint Trending Enhanced eBook Features
7. Enhancing Your Reading Experience
    - Adjustable Fonts and Text Sizes of Carbon Footprint Trending
    - Highlighting and Note-Taking Carbon Footprint Trending
    - Interactive Elements Carbon Footprint Trending
  8. Staying Engaged with Carbon Footprint Trending
    - Joining Online Reading Communities
    - Participating in Virtual Book Clubs
    - Following Authors and Publishers Carbon Footprint Trending
  9. Balancing eBooks and Physical Books Carbon Footprint Trending
    - Benefits of a Digital Library
    - Creating a Diverse Reading Collection Carbon Footprint Trending
  10. Overcoming Reading Challenges
    - Dealing with Digital Eye Strain
    - Minimizing Distractions
    - Managing Screen Time
  11. Cultivating a Reading Routine Carbon Footprint Trending
    - Setting Reading Goals Carbon Footprint Trending
    - Carving Out Dedicated Reading Time
  12. Sourcing Reliable Information of Carbon Footprint Trending
    - Fact-Checking eBook Content of Carbon Footprint Trending
    - Distinguishing Credible Sources
  13. Promoting Lifelong Learning
    - Utilizing eBooks for Skill Development
    - Exploring Educational eBooks
  14. Embracing eBook Trends
    - Integration of Multimedia Elements
    - Interactive and Gamified eBooks

### Carbon Footprint Trending Introduction

In this digital age, the convenience of accessing information at our fingertips has become a necessity. Whether its research papers, eBooks, or user manuals, PDF files have become the preferred format for sharing and reading documents. However, the cost associated with purchasing PDF files can sometimes be a barrier for many individuals and organizations. Thankfully, there are numerous websites and platforms that allow users to download free PDF files legally. In this article, we will explore some of the best platforms to download free PDFs. One of the most popular platforms to download free PDF files is Project Gutenberg. This online library offers over 60,000 free eBooks that are in the public domain. From classic literature to historical documents, Project Gutenberg provides a wide range of PDF files that can be downloaded and enjoyed on various devices. The website is user-friendly and allows users to search for specific titles or browse through different categories. Another reliable platform for downloading Carbon Footprint Trending free PDF files is Open Library. With its vast collection of over 1 million eBooks, Open Library has something for every reader. The website offers a seamless experience by providing options to borrow or download PDF files. Users simply need to create a free account to access this treasure trove of knowledge. Open Library also allows users to contribute by uploading and sharing their own PDF files, making it a collaborative platform for book enthusiasts. For those interested in academic resources, there are websites dedicated to providing free PDFs of research papers and scientific articles. One such website is Academia.edu, which allows researchers and scholars to share their work with a global audience. Users can download PDF files of research papers, theses, and dissertations covering a wide range of subjects. Academia.edu also provides a platform for discussions and networking within the academic community. When it comes to downloading Carbon Footprint Trending free PDF files of magazines, brochures, and catalogs, Issuu is a popular choice. This digital publishing platform hosts a vast collection of publications from around the world. Users can search for specific titles or explore various categories and genres. Issuu offers a seamless reading experience with its user-friendly interface and allows users to download PDF files for offline reading. Apart from dedicated platforms, search engines also play a crucial role in finding free PDF files. Google, for instance, has an advanced search feature that allows users to filter results by file type. By specifying the file type as "PDF," users can find websites that offer free PDF downloads on a specific topic. While downloading Carbon Footprint Trending free PDF files is convenient, its important to note that copyright laws must be respected. Always ensure that the PDF files you download are legally available for free. Many authors and publishers voluntarily provide free PDF versions of their work, but its essential to be cautious and verify the authenticity of the source before downloading Carbon Footprint Trending. In conclusion, the internet offers numerous platforms and websites that allow users to download free PDF files legally. Whether its classic literature, research papers, or magazines, there is something for everyone. The platforms mentioned in this article, such as Project Gutenberg, Open Library, Academia.edu, and Issuu, provide access to a vast collection of PDF files. However, users should always be

cautious and verify the legality of the source before downloading Carbon Footprint Trending any PDF files. With these platforms, the world of PDF downloads is just a click away.

### FAQs About Carbon Footprint Trending Books

**What is a Carbon Footprint Trending PDF?** A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it. **How do I create a Carbon Footprint Trending PDF?** There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF. **How do I edit a Carbon Footprint Trending PDF?** Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities. **How do I convert a Carbon Footprint Trending PDF to another file format?** There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobats export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats. **How do I password-protect a Carbon Footprint Trending PDF?** Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities. Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities. How do I compress a PDF file? You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share and download. Can I fill out forms in a PDF file? Yes, most PDF viewers/editors like Adobe Acrobat, Preview (on Mac), or various online tools allow you to fill out forms in PDF files by selecting text fields and entering information. Are there any restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

**Find Carbon Footprint Trending :**

virtual collaboration advanced

*ai productivity tools framework*

**time blocking planner tips**

virtual collaboration trending

toolkit virtual reality office

coworking spaces manual

**project management tools framework**

**checklist ai productivity tools**

**trending coworking spaces**

~~trending project management tools~~

~~planner automation remote work~~

**digital nomad lifestyle best**

**2025 edition hybrid work**

**guide automation remote work**

**work from home setup manual**

**Carbon Footprint Trending :**

An Introduction to Behavioral Psychology - Rivier Academics An Introduction to Behavioral Psychology. Behavioral psychology, or behaviorism, is a theory suggesting that environment shapes human behavior. In a most basic ... Introduction to Behavior: An Evolutionary Perspective ... An up-to-date approach to behavior analysis within the framework of evolutionary theory. Introduction to Behavior is a contemporary textbook for students in ... An Introduction to Behavior Analysis The book offers readers sound analyses of Pavlovian and operant learning, reinforcement and punishment, motivation and stimulus control, language and rule- ... An Introduction to Behavior Analysis An Introduction to Behavior Analysis delivers an engaging and comprehensive introduction to the concepts and applications for graduate students of behavior ... An Introduction to Behavior-Centered Design In this self-paced course, you will explore a step-by-step approach and principles for designing behavior change solutions to environmental challenges. Introduction to Psychology/Behavior Analysis The focus is on observable, measurable behavior and the role of the environment in establishing and maintaining behaviors. Introduction to Behavior-Based Design | by Jason Hreha What you need to know — in 10 mins · Time · Money · Cognitively demanding

(mental effort) · Physically demanding (physical effort) · Social ... The ABC's of Behavior Analysis: An Introduction to ... The ABCs of Behavior Analysis is not a psychology book. It is truly a behavior analysis book. It is about how behavior works and its emphasis is on behavior ... Introduction to Behavior An up-to-date approach to behavior analysis within the framework of evolutionary theory. Introduction to Behavior is a contemporary textbook for students in ... B-APT Form D Aptitude Test It is a work sample test in which the examinee writes coded instructions to a "computer" in a logical sequence to carry out program specifications. The ... Company wants me to take a test called the "Berger ... The idea behind the test is to evaluate the logic and reasoning abilities of the person taking it to see if they're worth training as a ... B-APT Advanced Form Aptitude Test 25 Test Questions. 2 hours to administer. Scored at Psychometrics. The B-APT AF is an advanced form of the B-APT, covering basic ... What questions are asked in Berger Paints TSTO written test? Jan 16, 2018 — In quantitative aptitude section , major questions were on areas, ages , ratio and proportion, compound interest, linear equation problems, ... Practice for Your Roland Berger Korn Ferry Assessment Test These tests evaluate one's behavioural competencies, experiences, personality traits, and motivators. Korn Ferry provides a number of different aptitude tests ... How to Ace the Roland Berger Analytical Test The sample test contains questions that test a candidate's ability to interpret data presented in multiple formats such as qualitative, quantitative, or ... Roland Berger Analytical Test: How to crack the RB ... - YouTube Anybody ever take the Berger Aptitude Test? Jul 11, 2007 — It's supposedly a test given to prospective computer programmers to see if they have any potential (presumably it checks that they have basic ... Berger Paints Nigeria Plc Aptitude Test Questions Berger Paints Nigeria Plc Aptitude Test Past Questions and Answers. We have collated various aptitude test past questions and answers in our database. Laboratory Manual by Sylvia Mader PDF, any edition will do Biology: Laboratory Manual by Sylvia Mader PDF, any edition will do · Best · Top · New · Controversial · Old · Q&A. Test Bank and Solutions For Biology 14th Edition By Sylvia ... Solutions, Test Bank & Ebook for Biology 14th Edition By Sylvia Mader, Michael Windelspecht ; 9781260710878, 1260710874 & CONNECT assignments, ... Human Biology 17th Edition Mader SOLUTION MANUAL Solution Manual for Human Biology, 17th Edition, Sylvia Mader, Michael Windelspecht, ISBN10: 1260710823, ISBN13: 9781260710823... Lab Manual for Mader Biology Get the 14e of Lab Manual for Mader Biology by Sylvia Mader Textbook, eBook, and other options. ISBN 9781266244476. Copyright 2022. Biology - 13th Edition - Solutions and Answers Our resource for Biology includes answers to chapter exercises, as well as detailed information to walk you through the process step by step. With Expert ... Sylvia Mader Solutions Books by Sylvia Mader with Solutions ; Inquiry Into Life with Lab Manual and Connect Access Card 14th Edition 672 Problems solved, Michael Windelspecht, Sylvia ... lab manual answers biology.pdf Lab manual answers biology Now is the time to redefine your true self using Slader's free Lab Manual for Biology answers. Shed the societal and cultural ... Lab Manual for Maders Biology: 9781260179866 Lab Manual for Mader Biology. Sylvia Mader. 4.1 ... answers to many exercise questions are hard to find or not in this book anyway ... Lab Manual for Human

Biology Sylvia S. Mader has authored several nationally recognized biology texts published by McGraw-Hill. Educated at Bryn Mawr College, Harvard University, Tufts ... Lab Manual to accompany Essentials of Biology ... - Amazon Amazon.com: Lab Manual to accompany Essentials of Biology: 9780077234256: Mader, Sylvia: Books. ... There are some mistakes in the answer key for some of the ...