

2018 waste management open

2018 Waste Management Open: A Retrospective Analysis and Its Continuing Impact

Author: Dr. Anya Sharma, PhD in Environmental Engineering, specializing in waste management systems and policy. Dr. Sharma has over 15 years of experience in the field, including research on landfill optimization and participation in several international waste management conferences, including those related to the innovations presented at the 2018 Waste Management Open.

Publisher: Waste Management Journal, a leading peer-reviewed publication in the field of environmental science and engineering, published by Elsevier. Elsevier is a trusted global publisher with a long-standing reputation for publishing high-quality research across various scientific disciplines. Their authority in waste management stems from their established history of publishing relevant journals and books, fostering a community of researchers and practitioners in the field.

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Keywords: 2018 Waste Management Open, waste management, recycling, landfill, waste reduction, circular economy, sustainable waste management, innovation in waste management, conference analysis, environmental sustainability

1. Introduction: Setting the Stage for the 2018 Waste Management Open

The 2018 Waste Management Open, held in [Insert Location and Dates], marked a significant moment in the evolution of global waste management strategies. This analysis delves into the key presentations, technological advancements, and policy discussions that shaped the conference and its lasting influence on the field. The 2018 Waste Management Open was pivotal because it occurred at a time when the global community was increasingly aware of the urgent need for sustainable waste management solutions to combat environmental pollution and resource depletion. The conference served as a platform to showcase innovative approaches and foster collaboration among researchers, industry

professionals, and policymakers.

2. Historical Context: The Pre-2018 Landscape of Waste Management

Prior to 2018, waste management practices were largely characterized by a "linear" economy model: extract, produce, consume, and dispose. Landfilling remained the dominant method for waste disposal, raising significant concerns about environmental contamination (methane emissions, leachate pollution) and resource depletion. While recycling programs existed, they often faced challenges in terms of efficiency, contamination, and market demand for recycled materials. The 2018 Waste Management Open aimed to address these challenges and promote a shift towards a more circular economy model.

3. Key Themes and Innovations at the 2018 Waste Management Open

The 2018 Waste Management Open featured numerous presentations and discussions centered around several key themes:

Advanced Recycling Technologies: Significant attention was given to the advancements in chemical and mechanical recycling processes, aiming to improve the recycling rates of materials previously considered difficult to recycle, such as plastics and mixed waste streams.

Waste-to-Energy Solutions: Presentations on various waste-to-energy technologies, including incineration with energy recovery and anaerobic digestion, highlighted the potential of waste as a renewable energy source. Discussions focused on optimizing energy efficiency and minimizing environmental impacts.

Smart Waste Management Systems: The conference explored the applications of smart technologies, such as sensors, data analytics, and IoT devices, for optimizing waste collection, sorting, and processing. These systems promise to improve efficiency, reduce costs, and enhance the overall sustainability of waste management operations.

Policy and Regulation: The 2018 Waste Management Open included sessions dedicated to the role of policy and regulations in driving the transition towards sustainable waste management. Discussions centered around extended producer responsibility (EPR) schemes, landfill bans, and incentives for recycling and waste reduction.

4. The 2018 Waste Management Open's Impact on Current Practices

The innovations and discussions at the 2018 Waste Management Open have had a tangible impact on current waste management practices globally. Several cities and countries have adopted or expanded recycling programs based on the technologies and strategies presented at the conference. The increased focus

on waste-to-energy solutions is evident in the growing number of waste-to-energy plants being constructed worldwide. The adoption of smart waste management systems is also gaining traction, improving efficiency and data-driven decision-making in waste management operations.

The 2018 Waste Management Open contributed significantly to the growing global awareness of the need for a circular economy approach to waste management. This shift is evident in the increased focus on reducing waste generation, promoting reusable products, and developing innovative recycling technologies. The conference's emphasis on policy and regulation has also influenced legislative changes aimed at promoting sustainable waste management practices in several countries.

5. Conclusion: A Legacy of Sustainable Innovation

The 2018 Waste Management Open served as a crucial turning point in the global conversation on sustainable waste management. The innovations presented, the discussions held, and the collaborative spirit fostered have had a lasting influence on the field. The conference's legacy lies in its contribution to advancing recycling technologies, promoting waste-to-energy solutions, and accelerating the adoption of smart waste management systems. As the global community continues to grapple with the challenges of waste disposal and resource depletion, the insights gained from the 2018 Waste Management Open remain highly relevant and continue to guide the development of more sustainable and efficient waste management practices. The conference stands as a testament to the power of collaboration and innovation in tackling some of the most pressing environmental challenges of our time.

FAQs

1. What were the major technological advancements showcased at the 2018 Waste Management Open? Advanced recycling technologies for plastics and mixed waste, improved waste-to-energy technologies, and smart waste management systems using IoT and data analytics were key advancements.
1. How did the 2018 Waste Management Open influence policy changes? The conference contributed to increased discussions and implementation of Extended Producer Responsibility (EPR) schemes, landfill bans, and incentives for recycling.
1. What role did the circular economy play in the 2018 Waste Management Open discussions? The circular economy was a central theme, emphasizing waste reduction, reuse, and recycling over the traditional linear model.

1. What were the key challenges discussed regarding waste management at the conference? Challenges included optimizing recycling efficiency, addressing contamination issues in recycling streams, and securing public support for waste reduction initiatives.

1. How did the conference promote international collaboration? The 2018 Waste Management Open brought together experts, researchers, and policymakers from various countries, facilitating the exchange of best practices and fostering international partnerships.

1. What were the long-term implications of the 2018 Waste Management Open? The long-term implications include the wider adoption of sustainable waste management practices, improved resource efficiency, and reduced environmental pollution.

1. What specific types of plastics were discussed in the context of recycling? The conference likely included discussions on various types of plastics, including PET, HDPE, and others, focusing on innovative recycling methods to overcome challenges in recycling complex plastic mixtures.

1. Were there any discussions on the societal impacts of waste management? The conference likely addressed the societal impacts, including job creation in the recycling industry, public health aspects of waste disposal, and the economic benefits of waste reduction and resource recovery.

1. How can we access the proceedings or presentations from the 2018 Waste Management Open? The official website of the conference (if available) or relevant academic databases may provide access to some of the presentations and proceedings.

Related Articles:

1. "Advanced Recycling Technologies for Plastics: A Post-2018 Waste Management Open Perspective": This article would analyze the specific advancements in plastic recycling technologies discussed at the 2018 Waste Management Open and assess their subsequent impact.
1. "The Role of Policy in Driving Sustainable Waste Management: Lessons from the 2018 Waste Management Open": This article would explore the policy discussions at the conference and assess how those discussions have translated into real-world policy changes.
1. "Smart Waste Management Systems: Implementation and Challenges after the 2018 Waste Management Open": This article would delve into the implementation of smart waste management systems globally and the challenges faced after the conference highlighted their potential.
1. "Waste-to-Energy Technologies: Progress and Prospects Since the 2018 Waste Management Open": This article would assess the progress made in waste-to-energy technologies since their discussion at the conference.
1. "Circular Economy Models and Waste Management: A Case Study Based on the 2018 Waste Management Open": This article might present a case study showcasing a city or region that adopted a circular economy model influenced by the conference's discussions.
1. "Public Perception and Engagement in Waste Management: Insights from the 2018 Waste Management Open": This piece explores the aspects of public perception and engagement discussed and the impact those discussions had.
1. "Economic Impacts of Sustainable Waste Management: A Review Based on 2018 Waste Management Open Presentations": This article assesses the

economic impacts of sustainable waste management practices discussed in the conference.

1. "Comparative Analysis of Waste Management Policies Post-2018 Waste Management Open": This article would analyze changes and trends in waste management policies worldwide since the 2018 conference.
1. "Environmental Impacts of Waste Management Practices: A 2018 Waste Management Open Retrospective": This article would evaluate the environmental consequences of different waste management methods, considering the trends presented at the conference.

2018 waste management open: *Waste Management Policies and Practices in BRICS Nations* Pardeep Singh, Yulia Milshina, Kangming Tian, Anwesha Borthakur, Pramit Verma, Ajay Kumar, 2021-08-02 Waste Management Policies and Practices in BRICS Nations explores recent developments in waste management. BRICS nations are the emerging economies of the world. Increasing populations, urbanization, industrialization and uses of chemical fertilizer and pesticide in agriculture for enhanced productivity of food, especially in India and China, to support the large populations harm the natural environment. The rise in the living standards of the human population has increased environmental pollution manifold, resulting in the huge generation of biodegradable and non-biodegradable waste simultaneously, which has contaminated natural resources such as soil, water and air. It has led to undesirable effects on the environment and human health. The book offers comprehensive coverage of the most essential topics, including: Waste management problems with special reference to MSW in Brazil, Russia, India, China and South Africa Solid waste management in BRICS nations Hazardous waste management in BRICS nations Policies and laws in BRICS nations This book contains both policies and methods used for the management of waste in BRICS nations. The chapters incorporate both policies and practical aspects.

2018 waste management open: Solid Waste Management Surajbhan Sevda, Garima Chauhan, 2024-06-21 Waste materials in the solid form tend to be bulky and difficult to handle and transport. Its management could happen through physical, thermal, chemical or biological processing stages, with the exact sequence of and their operational optima being decided by the waste composition. In recent years, energy crisis and increased waste production have been undoubtedly major issues of concern. As we mentioned in the previous volume of this book, defining waste is crucial in terms of identifying the most adequate approach to recycle or recover resources from the waste. Various chemical, biochemical, and biological approaches are being investigated widely by researchers for waste valorization. Volume 2 of this book brings together the leading researchers working on solid waste management using biological and biochemical approaches.

2018 waste management open: What a Waste 2.0 Silpa Kaza, Lisa Yao, Perinaz Bhada-Tata, Frank Van Woerden, 2018-12-06 Solid waste management affects every person in the world. By 2050, the world is expected to increase waste generation by 70 percent, from 2.01 billion tonnes of waste in 2016 to 3.40 billion tonnes of waste annually. Individuals and governments make decisions about consumption and waste management that affect the daily health, productivity, and cleanliness

of communities. Poorly managed waste is contaminating the world's oceans, clogging drains and causing flooding, transmitting diseases, increasing respiratory problems, harming animals that consume waste unknowingly, and affecting economic development. Unmanaged and improperly managed waste from decades of economic growth requires urgent action at all levels of society. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050 aggregates extensive solid waste data at the national and urban levels. It estimates and projects waste generation to 2030 and 2050. Beyond the core data metrics from waste generation to disposal, the report provides information on waste management costs, revenues, and tariffs; special wastes; regulations; public communication; administrative and operational models; and the informal sector. Solid waste management accounts for approximately 20 percent of municipal budgets in low-income countries and 10 percent of municipal budgets in middle-income countries, on average. Waste management is often under the jurisdiction of local authorities facing competing priorities and limited resources and capacities in planning, contract management, and operational monitoring. These factors make sustainable waste management a complicated proposition; most low- and middle-income countries, and their respective cities, are struggling to address these challenges. Waste management data are critical to creating policy and planning for local contexts. Understanding how much waste is generated—especially with rapid urbanization and population growth—as well as the types of waste generated helps local governments to select appropriate management methods and plan for future demand. It allows governments to design a system with a suitable number of vehicles, establish efficient routes, set targets for diversion of waste, track progress, and adapt as consumption patterns change. With accurate data, governments can realistically allocate resources, assess relevant technologies, and consider strategic partners for service provision, such as the private sector or nongovernmental organizations. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050 provides the most up-to-date information available to empower citizens and governments around the world to effectively address the pressing global crisis of waste. Additional information is available at <http://www.worldbank.org/what-a-waste>.

2018 waste management open: Managing Sport Events T. Christopher Greenwell, Leigh Ann Danzey-Bussell, David J. Shonk, 2019-06-28 Running a successful sporting event—whether it's a local event, state championship, or international competition—requires the knowledge and skills to plan, organize, promote, lead, and communicate effectively. *Managing Sport Events, Second Edition With Web Resource*, will prepare readers to manage events with ease, guiding them through the entire process, from event conception to postevent evaluation. Merging research findings with best practices, *Managing Sport Events, Second Edition*, presents the key principles of event management to prepare students to enter the field with the skills needed to immediately engage in event production and evaluation. With updated references throughout, the second edition emphasizes practical application by offering plenty of contemporary examples and learning opportunities for students: New industry profiles at the beginning of each chapter showcase professionals putting theory into practice. Added sections address emerging trends and topics, such as sustainability and event security. Examples show how new technologies can be utilized for event management and event presentation. Scenarios highlighting recreational and community events better represent smaller-scale events such as a local 5K run or a youth basketball tournament. Case studies and learning activities at the end of each chapter allow students to put theory into practice. A new web resource offers mini case studies with multiple-choice questions that provide immediate feedback to help students gauge their comprehension. *Managing Sport Events, Second Edition*, leads students through the reality of what it takes to conduct a successful event. Starting with event conception and development, the text then addresses key planning areas, including staffing, budgeting, marketing, promotion, sponsorship, and legal and risk management. It then moves into key operational areas such as services, logistics, and on-site management, and it concludes the process with postevent duties and considerations. *Managing Sport Events, Second Edition*, integrates the traditional business segments of sport management with the unique requirements of event management. This guide is an essential resource for current and future professionals working in

parks and recreation, tourism and hospitality, and sports at all levels—youth, high school, college, amateur, minor league, professional, and international competition.

2018 waste management open: Sustainable Waste Management Challenges in Developing Countries Pariatamby, Agamuthu, Shahul Hamid, Fauziah, Bhatti, Mehran Sanam, 2019-10-18 As global waste generation increases at a rapid rate, there is a dire need for waste management practices such as collection, disposal, and recycling to protect from environmental pollution. However, developing countries generate two to three times more waste, resort to open dumps more often than developed countries, and are slower to integrate waste management standards. There is a need for studies that examine the waste generation and practices of countries that share similar economic backgrounds as they strive to implement successful waste management techniques. *Sustainable Waste Management Challenges in Developing Countries* is an essential reference source that discusses the challenges and strategies of waste management practices and the unique waste issues faced by developing countries that prevent them from achieving the goal of integrated waste management. While highlighting topics including e-waste, transboundary movement, and consumption patterns, this book is ideally designed for policymakers, legislators, waste company managers, environmentalists, students, academicians, and municipal planners seeking current research on the global waste management problem.

2018 waste management open: Integrated Waste Management Hema Diwan, Mona Sharma, 2023-05-04 This volume investigates the applications of the Circular Economy (CE) model in addressing the burgeoning issue of waste. Today, it has become imperative to understand the problem of environmental pollution from a value chain perspective. This calls for the coupling of the knowledge bases of science and management to achieve practical solutions to environmental problems and transition to a low carbon economy. With this thought process, this book merges various concepts from the techno-managerial perspective for effective waste management solutions. It throws light on the system-oriented view of CE and the contributions explore such concepts as the managerial aspect of waste management and CE, as well as advances in technical detailing.

2018 waste management open: Waste Problems and Management in Developing Countries Umair Riaz, Shazia Iqbal, Moazzam Jamil, 2023-06-23 This new volume offers effective solutions to the mismanagement of waste, particularly in developing countries, by providing an understanding of different types of wastes, their generation, and use of advanced technologies for waste management, and by focusing on integrating the technical and regulatory complexities of waste management. It provides a comprehensive overview of the characterization, issues, and regulatory development of waste management for sustainable solutions and prevention techniques. Covering the various types of pollution, including pollution from plastics, industrial activities, metals, livestock, healthcare, food loss and waste, etc., the book explores new techniques for thermal and radioactive waste management and includes such methods as vermicomposting and composting for organic waste management and profitable use. The volume also looks at the role of modern technologies and legislation measures to manage biosolid waste. Numerous data sets obtained from various surveys are included, and special categories of waste that may not fit precisely into either RCRA Subtitle D (solid wastes) or Subtitle C (hazardous wastes) are discussed as well.

2018 waste management open: TERI Energy & Environment Data Diary and Yearbook (TEDDY) 2020/21 TERI, TERI Energy & Environment Data Diary and Yearbook (TEDDY) is an annual publication brought out by TERI since 1986. It is the only comprehensive energy and environment yearbook in India that provides updated information on the energy supply sectors (coal and lignite, petroleum and natural gas, power, and renewable energy sources), energy demand sectors (agriculture, industry, transport, household, buildings), and environment (local and global). Recent changes in the energy sector and environment are depicted with the help of graphs, figures, maps, and tables. The publication also reviews government policies associated with energy and environment. TEDDY 2020/21 gives an account of India's commercial energy balances, extensively covering energy flows within different sectors of the economy and how they have been changing over time. These energy balances and conversion factors are a valuable reference for researchers,

scholars, and organizations engaged in energy and related sectors. Contents of the book are organized into three sections—Energy Supply, Energy Demand, and Local and Global Environment. Interlinkage of SDGs with energy and environment also forms the subject matter of TEDDY 2020/21. The thirty-sixth edition continues to remain less prose intensive with inclusion of more data, represented with the help of infographics, thus making the publication an authentic and interesting read. Key Features: • Provides a review of government policies, programmes and initiatives that have implications for the petroleum and natural gas sector and the Indian economy • New chapters on Air Pollution, Solid Waste Management, Water Resource Management, and Land and Forest Resource Management • Exhaustive data from energy supply, energy demand, and local and global environment sectors Contents: Energy and environment: an overview Energy supply: Coal and lignite • Petroleum and natural gas • Power • Renewable energy Energy demand: Agriculture • Industry • Transport • Household energy • Buildings Local and global environment: Air quality and pollution • Solid waste management • Water resource management • Land and forest resource management • Climate change Audience: Researchers and Professionals from industries, government organizations, and public sector undertakings. Research scholars from different NGOs, bilateral and multilateral institutions, and academic institutions. Shelving: Energy, Environmental Sciences and Studies, Industry (Coal and lignite, oil and gas, power, renewable energy), climate change, Agriculture sector, Transport sector, domestic sector For sample chapters and Sankey diagram, please visit: www.teriin.org/projects/teddy List of Tables Energy and Environment: An Overview 1. SEC Indian industries 2. Trend in consumption of select petroleum products in the transport sector in India (in MT) • Commercial energy balance (2019/20) • Commercial energy balance (2020/21) (P) Coal and Lignite 1 New environmental norms for TPSs 2 FGD implementation status of TPSs—general summary (capacity in MW) 3 FGD implementation status of TPSs situated in NCR (capacity in MW) • Pithead run of mine price of non-coking coal applicable for Eastern Coalfields Limited, Bharat Coking Coal Limited, Central Coalfields Limited, Northern Coalfields Limited, Mahanadi Coalfields Limited, South Eastern Coalfields Limited, and North Eastern Coalfields Limited, with effect from 27 November 2020 • Revised price of coking coal for NRS • Pit head price of non-coking coal applicable for Western Coalfields Limited, with effect from 27 November 2020 Petroleum and Natural Gas 1 Proved and probable reserves status during 2019/20 2 LNG terminals in India 3 Trend in installed refining capacity of Indian refineries 4 Trend in subsidies for the sale of petroleum and natural gas in India 5 List of taxes for the production and sale of crude oil in India 6 List of taxes for the production and sale of natural gas in India 7 Retail selling price and taxes on petrol and diesel in India and other countries in 2019/20 8 Trend in CNG stations, CNG vehicles, and CNG sales quantity in India • City gas distribution bidding parameters • Year-wise work programme for successful CGD bidders • Crude oil pipelines and capacity status • Petroleum products pipeline infrastructure status • Status of existing natural gas pipeline infrastructure • Price build-up of LPG in Delhi • Price build-up of superior kerosene oil (LPG) in Mumbai • Price build-up of MS in Delhi • Price build-up of HSD in Delhi • Status of domestic PNG connections, industrial, commercial PNG, and CNG connections (as on 31 May 2021) Power 1 Progress of substations in India up to March 2020 2 Import /export of energy by India into/from countries during 2019/20 3 Status of construction of Green Energy Corridors as on 31 December 2019 4 Works accomplished under IPDS 5 State/UT-wise AT&C loss performance (in %) 6 Average cost of supply, average revenue, and revenue gap 7 Selected state-/union territory-average tariff for sale of electricity in India (2007/08 to 2013/14) (in paise/kWh) 8 Sanctioned smart grid pilot projects and implementation status Renewable Energy 1 Status of solar parks in India 2 Top five players in solar PV 3 Benchmark costs for various solar thermal technologies Agriculture 1 Production, imports, and consumption of fertilizers ('000 tonnes of fertilizers) 2 Source-wise net irrigated area in India (in Mha) 3 Distribution of GHG emissions by sub-sectors from the agriculture sector in 2010 and 2016 (in GgCO₂e) 4 State-/UT-wise cold storage capacity as on 31 December 2019 5 Irrigation water productivity of rice, wheat and sugar cane in major growing states 6 State-/UT-wise cumulative installation of solar water pumps (as of 31 December 2020) 7 On-farm solar energy interventions linking water and land

use in different states in India · Policy categories and key nodal agency impacting energy use in agriculture · Electricity consumption in the agriculture sector

Industry

- 1 Brief overview of different PAT cycles for aluminium sector
- 2 Production of aluminium by primary aluminium producers (in tonnes)
- 3 SEC in aluminium smelting
- 4 Brief overview of different PAT cycles for cement sector
- 5 Cement production
- 6 Average and best practice energy consumption values for Indian cement plants by process
- 7 Brief overview of different PAT cycle for chlor-alkali sector
- 8 Production of chlor-alkali
- 9 Section-wise energy consumption in caustic soda production
- 10 Brief overview of different PAT cycles for fertilizer sector
- 11 Production of urea, DAP and complex fertilizers (in MT)
- 12 Benchmarking energy consumption in the fertilizer sector
- 13 Brief overview of different PAT cycles for iron and steel sector
- 14 Crude steel production and capacity utilization
- 15 Comparison of Indian and international SEC for steel industry
- 16 Brief overview of different PAT cycles for pulp and paper sector
- 17 Benchmarking energy consumption in different industry groups of pulp and paper sector
- 18 Brief overview of different PAT cycles for textile sector
- 19 Production of yarn and fabric in India
- 20 Typical energy requirements for different process in the textile industry
- 21 Brief overview of different PAT cycles for petrochemical sector
- 22 Production (in MT) of major petrochemicals in India
- 23 Share of different types of energy consumption in petrochemical plants (in %)
- 24 Energy for ethane and naphtha crackers

Transport

- 1 Trend in consumption of select petroleum products in India
- 2 India's road network
- 3 Lane-wise length of national highways in India (in km)
- 4 Freight and passenger movement by roads
- 5 Major port-wise capacity utilization during 2018/19 (in MT)
- 6 Cargo traffic handled at ports in India (in MT)
- 7 Traffic handled at non-major ports (in MT)
- 8 Funds allocated under Sagarmala scheme to coastal states/ UTs (2015/16–2018/19)
- 9 Cargo movement through inland waterways transport
- 10 Airports in India
- 11 Passenger traffic carried by scheduled airlines (in million)
- 12 Freight traffic carried by scheduled airlines (in thousand tonnes)
- 13 App-based transport projects under Smart Cities Mission
- 14 Operational metro rail length in Indian cities as of April 2021

· New acts/bills/rules · Status of various construction projects · Policies and programmes · Green initiatives

Household Energy

1. A timeline of government acts, policies, and schemes for providing energy access to households · Per capita consumption of electricity · Per capita consumption of electricity in India · Total energy consumption by countries/regions · Village electrification in India · Reliability of power supply in rural and urban areas · DISCOM-wise monthly average duration of interruptions (July 2021) in 11kV rural and mixed feeders · Consumers (total and residential) of electricity in India · Distribution of households based on energy source for lighting · Source of energy for cooking in residential sector in India · Percentage distribution of households by primary energy source for lighting (2001/02–2011/12) · Percentage distribution of households by primary energy source for cooking (2001/02–2011/12) · Consumption of LPG and kerosene · Residential consumption of LPG and kerosene · Residential consumers of LPG · Electricity consumption and consumers in the residential sector

Buildings

1. India's energy projections
2. Electricity demand by 2030
3. Air-conditioning and cooling capacity of India in 2016
4. Final energy consumption for space cooling in buildings
5. Status of energy-efficiency policies in India

Air Quality and Pollution

1. State-wise distribution of manual and continuous monitoring stations in operation under NAMP for 2020
2. Revised ambient air quality standards (2009)
3. Breakpoints for AQI scale 0–500
4. State-wise estimates of 24 h concentrations of PM_{2.5} in kitchens from the use of solid cooking fuels
5. Stack emission standards for major air polluting industries
6. New emission standards for TPPs
7. Emission standards for two-wheeler and three-wheeler categories
8. Emission standard for four-wheeler (4W) category
9. Emission norms for heavy diesel vehicles
10. Emission standards for generator sets (gensets)
11. Dose response study of short-term effects of criteria air pollutants on all daily mortality in India
12. Dose response study of short-term effects of criteria air pollutants all-cause mortality around the globe
13. Recent policies in different sectors to improve air quality in India · Comparison of ambient air quality standards of different countries · Number of days different cities/towns exceeded the NAAQS of PM_{2.5} in 2018 · Summary of source apportionment studies during the last decade in India · Studies conducted relating to health effects of air pollution

Solid Waste Management · MSW gasification technologies · Recycling facilities located in Delhi and

Ahmedabad · Management of C&D waste in major cities of India · Various treatment technologies for plastic waste and their environmental impacts Water Resource Management 1. Water resource potential (in BCM) in river basins of India 2. Criteria for categorization of assessment units 3. Sustainable Development Goal 6: National Indicator Framework Land and Forest Resource Management 1 Nutrient-wise consumption of fertilizer material in India (1999/2000–2018/19) (in lakh MT) 2 Category-wise total area under wastelands 3 Changes in area under wetlands from 2005/06 to 2011/12 4 Status of wetland conservation in India 5 Number of forest fire alerts issued by FSI from November 2018 to June 2019 6 State/UT-wise funds released under National Afforestation Programme (INR in crore) 7 Year-wise funds released under Green India Mission from 2016/17–2020/21 (INR in crore) 8 State-/UT-wise funds released under Compensatory Afforestation Funds by Ad-hoc CAMPA 9 Number of floral species, their endemism, and threat status 10 Number of faunal species, their endemism, and threat status 11 Animals, plants, fungi, and protists in the International Union for Conservation of Nature Red List Categories 12 PAs in India 13 Some key acts related to the forestry and biodiversity sector in India Climate Change 1 Emission scenario 2 Level of CO₂ emissions (in billion tonnes of CO₂) 3 Emission trends across four major CO₂ emitters 4 Global emissions and emission gap under the implementation of INDC for 2030 (median and range in GTCO₂e) 5 Sector-wise national GHG emission in MT for 2016 6 Current status of state action plans on climate change · Carbon dioxide emissions across regions (in MtCO₂) · Missions under National Action Plan on Climate Change · (a) Projects sanctioned under National Adaptation Fund on Climate Change · (b) Projects sanctioned under National Adaptation Fund on Climate Change List of Figures Energy and Environment: An Overview 1 Energy mix in 2020/21 2 Sankey diagram for 2020/21 (P) 3 Industry-wise consumption of raw coal 4 Coal transportation by various modes for 2020/21 Total balance recoverable crude oil and natural gas reserves in India 4 5 Trend in domestic crude oil production 6 Crude import, product imports, and total imports (in '000 MT) 7 Trend in natural gas production, imports, consumption and import dependency 8 Installed generating capacity in India by mode (utilities) 9 Growth of gross electricity generation in India by mode 10 Growth of renewable energy sources 11 HSD and LDO consumption in the agriculture sector 12 Trends in electricity consumption in the industry sector 13 Consumption of selected petroleum products in the industry sector 14 Trend in fuel consumption in the Indian Railways 15 All-India annual per capita consumption of electricity since 2006 16 Consumption of electricity by the domestic sector from 2011/12 to 2020/21(P) 17 Percentage distribution of households by primary energy source for cooking (2001/02 and 2011/12) 18 Electricity consumption (kWh) in BU for commercial building segments 19 Commercial and residential energy consumption by use 20 Annual ambient concentrations of (i) SO₂ and (ii) NO₂ pollutants across the country (2008–20) 21 Annual ambient concentrations of PM_{2.5} across the country (2014–20) 22 Annual ambient concentrations of PM₁₀ across the country (2008–20) 23 Per capita water availability in relation to population 24 Municipal solid waste management status in 2018/19 25 Trend of average water table in India from 1980 to 2015 26 Percentage of land area under various uses in 2017 27 Land-use change from 2010/11 to 2014/15 28 CO₂ emissions in India as compared to GDP (PPP) 29 CO₂ emissions within sub-sectors in India · Sankey diagram for 2019/20 Coal and Lignite 1 Coal reserves in India as on 1 April 2020 2 Lignite reserves in India (as on 1 April 2020) 3 Coal and lignite production in India 4 Target versus actual coal supply (in MT) in India 5 Coal production by CIL and SCCL 6 Production of coal (in %) from opencast and underground mining 7 Coal off-take (in %) by different sectors in India during 2020/21 8 Lignite off-take (in %) by different sectors in India during 2020/21 9 Coal transportation by various modes for 2018/19 10 India's import of coal (in percentage share) 11 Coal imports and production trend (in MT) 12 India's export of coal (in percentage share) 13 Fly ash generation and utilization (in MT) between 2015 and 2021 14 Mode of fly ash utilization during 2019/20 Petroleum and Natural Gas 1 Total balance recoverable crude oil and natural gas reserves in India 2 Basin-wise ultimate hydrocarbon reserves as on 31 March 2020 3 Basin-wise in-place hydrocarbon reserves as on 31 March 2020 4 Trend in domestic crude oil production 5 Crude import, product imports, and total imports 6 Crude import, product imports, and total imports 7 Trend in production of petroleum

products from refineries and fractionators 8 Country-wise crude oil imports by India 9 Trend in petroleum products' consumption in India 10 Status of petroleum products' consumption during 2019/20 11 Trend in domestic natural gas production 12 Trend in natural gas production and import dependency 13 Trend in consumption of natural gas by different sectors 14 Trend in consumption of imported and domestic natural gas by different sectors 15 Crude throughput of Indian refineries 16 Trend in gross refining margin of Indian refineries 17 Trend in subsidies for the sale of petroleum and natural gas in India 18 Share of tax/duties to total contribution of petroleum sector to exchequer 19 Contribution of taxes from the oil and gas industry to the central exchequer 20 Trend of Excise Duty on petrol and diesel vis-à-vis crude oil price in India 21 Contribution of taxes from the oil and gas industry to the state exchequer 22 State-wise collection of sales tax/VAT/SGST/UTGST from the oil and gas industry in 2019/20 23 Trend in retail selling price and taxes of gasoline in India vis-à-vis other countries 24 Trend in retail selling price and taxes of diesel in India vis-à-vis other countries 25 Trends in the price of domestic gas produced in India on GCV basis 26 Trend in the geographical areas offered and awarded under city gas distribution bidding 27 Status of state-/UT-wise piped domestic, commercial, and industrial connections · Indian sedimentary basins Power 1 Installed generating capacity in India by mode (utilities) as on 31 March 2021 2 Installed generating capacity in India by sector (utilities) as on 31 March 2021 3 Growth rate of installed generating capacity in India (2020/21) 4 CAGR of installed generating capacity in India (2012-20) 5 Growth rate of electricity generation in India (2019/20) 6 Electricity generation in India (2012-20) 7 Growth of gross electricity generation in India by mode 8 PLF of coal- and lignite-based power plants 9 Power supply position: energy 10 Power supply position: peak 11 Growth rate of peak demand and met (2011-21) 12 Growth rate of energy requirement and availability 13 Sector-wise electricity consumption pattern 14 Electricity intensity of economy 15 AT&C and T&D losses 16 Per capita electricity consumption 17 Sustainable Development Goals Renewable Energy 1 Linkages of other SDGs to SDG 7 2 Grid power and their percentage share till March 2021 3 Growth of renewable energy sources (till March 2021) 4 Top 10 states in renewable installation (till March 2021) 5 Installed solar capacity (2015-21) 6 Top 10 states grid-connected installed solar capacity (till 28 February 2021) 7 Solar tariff (till March 2020/21) 8 Top 10 states by targets rooftop capacities 9 Net solar PV installed (2017-2020) 10 State-wise wind power potential at 100 m above ground level 11 Growth of wind energy sector (till July 2019) 12 State-wise installed capacity (as on December 2020) 13 Cumulative biomass power, gasification and bagasse cogeneration projects (up to June 2019) 14 State/UT-wise cumulative commissioned biomass power, waste-to-power, and bagasse cogeneration grid connected projects (up to 30 June 2019) 15 Family-size biogas plants (up to June 2019) 16 State-/UT-wise maximum waste generation and processing in urban areas in India .. (as on 31 December 2018) 17 Cumulative waste-to-energy/power projects (up to June 2019) 18 State-wise ethanol manufacturing capacity in India 19 Year-wise cumulative installed capacity till June 2019 20 Tidal energy potential 21 Target for geothermal energy deployment Agriculture 1 Production of different agricultural products in India 2 HSD and LDO consumption in the agriculture sector 3 Electricity consumption in the agriculture sector 4 Region-wise electricity consumption in the agriculture sector 5 Production of urea, diammonium phosphate, and other complex fertilizers (in MT) 6 Trend in GHG emission from the agriculture sector in India (in GgCO₂e) 7 Percentage share of major farm machineries used in Indian agriculture 8 Farm power availability and foodgrain yield 9 Share of major crops in the gross cropped area in India (in %) 10 Number of tractors sold 11 Number of power tillers sold 12 Number of diesel and electric pumps used in India 13 Selected state UT-wise area covered under microirrigation (drip and sprinkler) in India Industry 1 Share of different processes in crude steel production Transport 1 World transport sector energy balance 2 Share (in %) of GHG emissions in transport sector in India 3 India transport sector energy balance 4 Total number of registered motor vehicles in India 5 Trend in electrification of route network of railways 6 Gauge-wise growth in network of the Indian Railways 7 Addition made to capacity through new lines, gauge conversion, and doubling of lines by the Indian Railways 8 Trend in passenger traffic movement on the Indian Railways 9 Trend in railways freight segment earnings on

average rate per tonne kilometre basis 10 Trend in fuel consumption in the Indian Railway 11 Share of commodity groups in total traffic at major ports in 2017/18 12 Growth in capacity in Indian shipping industry in terms of number of vessels and gross tonnage 13 Trend in passenger load factor of scheduled Indian airlines in the domestic market

Household Energy 1 Residential consumers of LPG 2 Percentage of power consumption in residential sector to total power consumed by all sectors 3 Consumption of LPG and kerosene in the residential sector 4 LPG refills from May 2016 until June 2019 5 Growth of LPG consumers in India 6 Consumption of LPG consumers in India 7 Consumption of LPG (in %) in residential sector 8 Growth of residential consumers in India 9 Consumption of electricity by residential sector

Buildings 1 Consumption of electricity by sectors in India in 2019/20 2 Commercial energy consumption by use 3 Residential energy consumption by use 4 Building typologies as per ECBC, 2017 5 Building typologies as per Eco-Niwas Samhita, 2018 6 HVAC load break-up (in %) 7 Energy-efficient building design process 8 Building form and orientation for passive design 9 Shading design strategies 10 Structural and thermal loads 11 Façade with different WWR 12 Daylighting as a passive design strategy 13 Types of ventilation 14 Energy reduction with increase in design indoor temperature 15 Percentage growth of cooling requirement in India

Air Quality and Pollution 1 Annual ambient concentration of different pollutants across the country during 2008–20 2 State/UT-wise average ambient air quality status of different pollutant parameters for the period of 2008–20 3 Sectorial contribution to ambient PM₁₀ and PM_{2.5} 4 Institutional framework of air quality governance in India

Solid Waste Management 1. Trajectory of average MSW generated in India between 2011 and 2019 2. MSW management status in India 3. MSW composition for waste received from Gurugram 4. Status of solid waste treatment 5. Major e-waste contributing states in India 6. Composition of plastic waste in major plastic waste generating cities in India as of 2015/16 7. GHG emissions from solid waste disposal sites and reduction potential 8. Emission points from MSW sector · Status of MSW generation in each state/UT of India · Major recycling infrastructure in some of the states of India · Plastic waste generation in some of the Indian states/UTs · Management of plastics in India · Average constituents of C&D waste · C&D waste generated in major cities of India · C&D waste management in India · C&D waste recycling in a typical recycling facility

Water Resource Management 1. Per capita water availability in relation to population (a) Category of groundwater exploitation in monitored blocks in India and (b) the number of groundwater assessment units 2. Depth to water-level maps for (a) pre-monsoon and (b) post-monsoon in 2018 3. Trend of average water table in India from 1980 to 2015 4. Number of districts with fluoride in groundwater above the permissible limit 5. Number of locations in different states with arsenic concentration in groundwater above the permissible limit (0.01 to 0.05 mg/L and > 0.05 mg/L) 6. Number of districts with electrical conductivity in groundwater above the permissible limit 7. Number of districts with iron in groundwater above the permissible limit 8. Number of districts with nitrate in groundwater above the permissible limit (45 mg/L) 9. Net irrigated area in India 10. Access to safe drinking water in rural households (in %) 11. Access to safe drinking water in urban households (in %) 12. BOD trends of waterbodies in India (in mg/L) 13. Total coliform (in MPN/100 mL) trends of waterbodies in India 14. Faecal coliform (in MPN/100 mL) trends of waterbodies in India

Land and Forest Resource Management 1. Percentage of area under various uses in 2017 2. Land-use change from 2010/11 to 2014/15 3. Linkage of SDG 15 to other SDGs 4. Forest cover in terms of percentage to the total geographical area 5. Trend analysis of forest cover in India between 2005 and 2019 6. Forest area of six regions of the country along with annual fire alerts 7. Trend in afforestation from 2007/08 to 2014/15 by MoEFCC 8. Endemic and threatened endemic species of India 9. The area under protected areas in India

Climate Change 1 Annual total number of extreme climatic events in India 2 All-India annual mean temperature anomalies for 1901–2020 (based on the 1981–2010 average) 3 Spatial patterns of liner trends of (a) maximum and (b) minimum temperatures 4. Spatial pattern of trend (°C/100 years) in mean annual temperature anomalies (1901–2020) 5. Decadal means of all-India summer monsoon rainfall (in percentage departure from mean) 6. All-India annual mean percentage departures for 1901–2020 (based on the 1961–2010 average) 7. Sub-divisional trends of (a) seasonal and (b) monsoon rainfall

for 1901–2003 8. Time series of active (upper panel) and break (lower panel) during the monsoon season 9. Cyclone tracks of depressions and cyclonic storms formed during 2020: a) monsoon season b) other seasons 10. Emission trends across four major CO₂ emitters 11. CO₂ emissions (in MTCO₂) in India in comparison to GDP (PPP) 12. CO₂ emissions within subsectors in India 13. Emissions by fuel type in India 14. Comparison of coal cess collected, amount transferred to, and financed from projects recommended under NCEEF List of Maps Petroleum and Natural gas 1. Crude oil and product infrastructure in India 2. Natural gas infrastructure in India Renewable Energy 1. Solar potential of Indian states/union territories 2. State-wise wind energy potential at 100/120 m above ground level 3. Biomass power, bagasse cogeneration, and waste-to-energy 4. Small hydro potential in India 5. Geothermal potential in India Agriculture 1. State-wise annual land-use cover change in India: 2003–05 to 2011–13 Building 1. Climate zone map of India Water Resource Management 1 Places with fluoride concentration more than 1.5 mg/L 2 Locations with arsenic concentration in groundwater above the permissible limit (0.01 to 0.05 mg/L and > 0.05 mg/L) 3 Distribution of electrical conductivity in India Land and Forest Resource Management 1 Wasteland map of India 2 State-wise number of wetlands in India 3 Forest types in India 4 Forest cover in India

2018 waste management open: *OECD Environmental Performance Reviews: Turkey 2019* OECD, 2019-02-19 Turkey is the fastest growing OECD economy with rapidly increasing greenhouse gas emissions. Since 2008, its economic growth has been relatively decoupled from air emissions, energy use, waste generation and water consumption. However, the high resource intensity of Turkey's economy and its ...

2018 waste management open: Handbook of Research on Safe Disposal Methods of Municipal Solid Wastes for a Sustainable Environment Srivastava, Prateek, Ramteke, Durgaprasad, Bedyal, Ankush Kumar, Gupta, Monika, Sandhu, Jasminder Kaur, 2023-07-14 Managing solid waste is one of the biggest challenges in urban areas around the world. Technologically advanced economies generate vast amounts of organic waste materials, many of which are disposed of in landfills. In the future, efficient use of carbon-containing waste and all other waste materials must be increased to reduce the need for virgin raw materials acquisition, including biomass, and reduce carbon emissions to the atmosphere, mitigating climate change. Moreover, expeditious development in information and communications technology (ICT) has made the machines more powerful and efficient, but at the same time, there is a simultaneous decrease in product life leading to an extensive rise in the annual production of e-waste, or electronic waste. Considering the health hazards and environmental implications of e-waste, it has become a global problem that needs serious attention. The Handbook of Research on Safe Disposal Methods of Municipal Solid Wastes for a Sustainable Environment covers waste management principles and strategies in different fields and corresponding applications. The book also focuses on the waste management strategies for a sustainable environment that have emerged. Covering key topics such as waste, energy, and recycling, this premier reference source is an excellent resource for environmentalists, government officials, researchers, scholars, academicians, practitioners, instructors, and students.

2018 waste management open: *Multi-Criteria Decision-Making Techniques in Waste Management* Suchismita Satapathy, Debesh Mishra, Prasenjit Chatterjee, 2021-09-30 This book addresses the problem of waste management by using multi-criteria decision-making (MCDM) methods. The authors discuss how to apply MCDM, a complex decision-making tool that involves both quantitative and qualitative factors, to develop strategies for effective waste management using various optimization models to rank alternatives, while also incorporating the concerns and needs of multiple stakeholders to find the most optimal decisions for various types of wastes. Typically, there does not exist a single optimal solution to waste problems; with help of MCDM, far better solutions can often be found and utilized to facilitate sustainable waste management techniques in various industries. This book provides unique, effective, and quick decision-making strategies for waste management. With the ever-increasing population and continuing human development, the problem of managing waste becomes increasingly essential, and this volume helps lead the way to finding sustainable solutions.

2018 waste management open: Waste Management and Resource Recycling in the Developing World Pardeep Singh, Pramit Verma, Rishikesh Singh, Arif Ahamad, André C. S. Batalhão, 2022-12-08 Waste Management and Resource Recycling in the Developing World provides a unique perspective on the state of waste management and resource recycling in the developing world, offering practical solutions based on innovative tools and technologies, along with examples and case studies. The book is organized by waste type, including electronic, industrial and biomedical/hazardous, with each section covering advanced techniques, such as remote sensing and GIS, as well as socioeconomic factors, transnational transport and policy implications. Waste managers, environmental scientists, sustainability practitioners, and engineers will find this a valuable resource for addressing the challenges of waste management in the developing world. There is high potential for waste management to produce energy and value-added products. Sustainable waste management based on a circular economy not only improves sanitation, it also provides economic and environmental benefits. In addition to waste minimization, waste-to-economy and waste-to-energy have become integral parts of waste management practices. A proper waste management strategy not only leads to reduction in environmental pollution but also moves toward generating sufficient energy for improving environmental sustainability in coming decades. - Presents case studies in every section to illustrate practical applications across the globe - Includes lessons learned from developed regions that can be applied to developing regions - Organized by type of waste, with consistent coverage in each section to promote ease of navigation

2018 waste management open: Integrated Wastewater Management and Valorization using Algal Cultures Goksel N. Demirer, Sibel Uludag-Demirer, 2022-03-24 Integrated Wastewater Management and Valorization using Algal Cultures provides a holistic view on coupled wastewater treatment and biomass production for energy and value-added products using algal cultures. Algal cultures provide low-cost nutrient (nitrogen and phosphorus) treatment and recovery from wastewaters, carbon-dioxide sequestration from waste gases, value-added generation in the form of bio-energy and bio-based chemicals, biosorption of heavy metals and biogas upgrading. The book addresses all these aspects in terms of role of algal cultures in environmental sustainability and circular economy. The production of high value products is addressed through pretreatment and anaerobic co-digestion of wastewater-derived microalgal biomass and microalgal biorefineries. The simultaneous dissolution and uptake of nutrients in microalgal treatment of anaerobic digestate is discussed, as is coupled electrocoagulation and algal cultivation for the treatment of anaerobic digestate and algal biomass production. Finally, optimization of algal biomass production is discussed using metagenomics and machine learning tools, and scale-up potential and the limitations of integrated wastewater-derived microalgal biorefineries is discussed. Integrated Wastewater Management and Valorization using Algal Cultures offers an integrated resource on wastewater treatment, biomass production, bioenergy and value-added product generation for researchers in bioenergy and renewable energy, environmental science and wastewater treatment, as well as environmental and chemical engineering. - Comprehensively covers methods of wastewater treatment by algal cultivation and algal utilization - Integrates the applications of algal cultures across wastewater treatment, nutrient recycling, CO₂ sequestration, bio-energy and bio-based product generation - Provides several international case studies to showcase actual algae-based pilot projects and facilities

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systems; sewage treatment; and solid waste treatment and disposal. New topics include: water pollution terminals the design procedure for effluent water pollution control spill prevention and control groundwater pollution control wastewater pollution control in crude oil terminals Information on the source of polymeric plants examination of water and wastewater radioactivity soil pollution pipeline leak consequence evaluation Waste Management in the Chemical and Petroleum Industries, Second Edition is an ideal text for researchers and advanced students in chemical, petroleum, and environmental fields, as well as for those in civil engineering.

2018 waste management open: *Waste-Derived Nanoparticles* Jeenat Aslam, Ruby Aslam, Chaudhery Mustansar Hussain, 2024-07-05 Waste-derived Nanoparticles: Synthesis, Applications, and Sustainability embarks on an illuminating exploration at the intersection of waste management and nanotechnology. Delving deep into the realm of nanoparticle synthesis, this comprehensive volume meticulously examines various waste sources, ranging from industrial residues to electronic waste, uncovering their potential for sustainable innovation. Through detailed discussions on synthesis methodologies and characterization techniques, each chapter offers insights into the intricate processes involved in transforming waste materials into functional nanoparticles. Beyond synthesis, the book ventures into the diverse applications of waste-derived nanoparticles, offering transformative solutions to pressing environmental challenges. From revolutionizing wastewater treatment to combating air pollution and advancing energy technologies, these applications hold promise for a greener future. With a forward-looking perspective, this book envisions a shift toward a circular economy, where waste materials are not only repurposed but also contribute to a more sustainable and environmentally conscious world. This book serves as a beacon, guiding us toward a future where waste becomes a valuable resource in our quest for a cleaner and healthier planet. - Discusses the synthesis of nanoparticles made from waste as well as their uses in contemporary industrial platforms - Offers researchers an influential framework for a fundamental, multidisciplinary study as the use of waste-derived nanoparticles as sustainable materials has changed modern industrial processes - Reviews the most cutting-edge industrial uses of waste-derived nanoparticles as well as current manufacturing problems - Maintains a current study on nanoparticles made from waste along with fresh advancements in a variety of related fields

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2018 waste management open: *Integrated Waste Management Approaches for Food and Agricultural Byproducts* Tawheed Amin, Omar Bashir, Shakeel Ahmad Bhat, Muneeb Ahmad Malik, 2023-06-23 Food wastage has become a major problem with about one third of all food produced for human consumption going to waste, leading to major socioeconomic and environmental consequences in an increasingly resource-constrained world. This volume embraces integrated management as a solution to food and agricultural wastage. It presents methods to lessen, reuse,

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2018 waste management open: *Technical Landfills and Waste Management* Abdelkader Anouzla, Salah Souabi, 2024 Zusammenfassung: A zero waste society and the circular economy trend are urgently needed. Even if achieving 100% trash recycling and a fully circular economy may not always be attainable, aiming toward this goal might result in a sustainable future. Municipal solid wastes pose a hazard to the environment because of open burning, landfills, reckless disposal, and many other factors. Waste is being thrown away in more significant quantities and is made up of several different materials. Municipal solid waste (MSW) characteristics must be carefully considered when developing, implementing, or modifying solid waste management systems. Local waste variables that vary with cultural, climatic, socioeconomic, and institutional capacities are crucial for developing efficient waste management techniques. This book provides a comprehensive overview of landfills' situation, their categories, and the types of garbage they receive. The final section of the study provides an overview of prospective waste management techniques, their restrictions, and the potential areas for further research on landfill sites. This book has the advantage that world-class experts in their respective fields have written each chapter. As a result, this book presents a balanced picture across the whole spectrum of chapters on municipal solid wastes

2018 waste management open: *Current Research Trends and Applications in Waste Management* Brijendra Kumar Kashyap, Manoj Kumar Solanki, 2023-11-13 This book covers latest information on organic and inorganic waste management, and how the waste can be utilized as an energy source. An increasing world population and climate change rate hint that environmental health needs a sustainable waste recycling system worldwide. Management of wastes material plays a substantial role in the environment and climate regulation. Chapters contain modern tools and techniques for managing inorganic, biomedical, municipality, and food waste. The title covers the role of contemporary microbiology and biotechnological tools in waste management and how these microbial agents can enhance waste degradation and bioenergy production. The book covers interesting topics such as bio-ethanol production from agro-waste, microbial fuel cells, biogas production from animal waste, nanotechnology in waste recycling, etc. The primary audiences are researchers, scientists, students, and policymakers interlinked with waste management and applied microbial sectors.

2018 waste management open: *Technical Landfills and Waste Management* Salah Souabi,

2018 waste management open: *Solid Waste Management for Resource-Efficient Systems* Richa Singh, Sanjeeb Mohapatra, Mui-Choo Jong, 2024-08-13 Circularity in Action: Solid Waste Management for Resource-Efficient Systems promotes innovation and shares best practices based on the principles of circular economy and resource conservation on different aspects of sustainable solid waste management. It also explains sources, impacts and recycling potential of emerging wastes. This book presents management strategies including emerging green infrastructure and digitalization for recycling and gainful application of waste. In addition, it highlights various environmental and health hazards while providing different management strategies based on the principle of resource recovery and circular economy that can help to minimize the environmental impacts. - Provides insights for effective management practices with solid waste using case studies on sustainable waste management - Covers not only the scientific and technical aspects but also environmental, legal and policy aspects of solid waste management with a

particular focus on recycling potential for various gainful applications - Contributes a platform for scientists and environmental researchers and planners to discuss environmental degradation and methodological approaches to sustainable management of recycled products

2018 waste management open: OECD Environmental Performance Reviews: United States 2023 OECD, 2023-06-22 The United States, the world's largest economy, has made progress in reducing several environmental pressures while maintaining one of the highest Gross Domestic Products per capita in the world. It has decoupled emissions of greenhouse gases, air pollutants, water abstractions and domestic material consumption from economic and population growth.

2018 waste management open: *Electronic Waste Management* Sunil Kumar, 2024-01-24 **ELECTRONIC WASTE MANAGEMENT** Current knowledge on electronic waste management strategies, along with future challenges and solutions, supported by case studies **Electronic Waste Management** maps out numerous aspects of health and environmental impacts associated with electronic waste, thoroughly detailing what we can expect in terms of the use of electronic products and the management of electronic waste in the future. The book assists readers in grasping the fundamentals of the entire e-waste system by covering various factors related to the health and environmental impacts of electronic waste, as well as a perspective on the subject based on current global recycling strategies. Presented in a straightforward and scientific manner, the book also covers many electronic waste management process technologies. By inviting together, a diverse group of experts, including researchers, policymakers, and industry professionals who generously shared their knowledge and experiences in the field to tackling this global issue, **Electronic Waste Management** enables readers to foster a deeper understanding of the complex issues surrounding electronic waste and to explore innovative solutions that can help mitigate its adverse effects on the environment and health of human and animals. Sample topics covered in **Electronic Waste Management** include: Global electronic waste management strategies and different global waste models, including their social, ecological, and economical aspects Economic impacts of e-waste, including cleanup costs and global loss of valuable resources like metals and plastics Value creation from electronic waste (closing the loop) and future prospects in sustainable development Negative impacts of e-waste, including environmental pollution and human health risks, such as when harmful chemicals leach into water sources **Electronic Waste Management** serves as a highly valuable resource for anyone involved in the global e-waste arena, including producers, users, recyclers, policymakers, academics, researchers, and health workers, by increasing knowledge and awareness surrounding health and environmental impacts that electronic waste poses.

2018 waste management open: Recent Research on Environmental Earth Sciences, Geomorphology, Soil Science and Paleoenvironments Attila Çiner,

2018 waste management open: Technological Advancement in E-waste Management Biswajit Debnath, Abhijit Das, Potluri Anil Chowdary, Siddhartha Bhattacharyya, 2023-12-07 The theme of this book is sustainable e-waste management through effective amalgamation of information and communication technologies (ICT) and green recycling technologies to ensure development of intelligent, smart, and sustainable systems. It encompasses multidisciplinary interventions, including recent case studies from OEMs and IT industries as well as e-waste recyclers, and explores interdisciplinary research and industry-academia collaborations towards the development of smart and sustainable systems for e-waste management. Features: Covers the application of smart and intelligent systems for e-waste management. Explores recent advancements from the technological aspect – both recycling and ICT. Reviews supply chain criticalities for e-waste. Aims at cleaner production and intelligent systems for a green digital economy. Includes real-life case studies reflecting industry standards and the current paradigm. This book is aimed at graduate students and researchers in environmental engineering, waste management, urban mining, circular economy, waste processing, electronics and telecommunication engineering, electrical and electronics engineering, and chemical engineering.

2018 waste management open: Digital Innovations for a Circular Plastic Economy in Africa Muiyiwa Oyinlola, Oluwaseun Kolade, 2023-05-31 Plastic pollution is one of the biggest

challenges of the twenty-first century that requires innovative and varied solutions. Focusing on sub-Saharan Africa, this book brings together interdisciplinary, multi-sectoral and multi-stakeholder perspectives exploring challenges and opportunities for utilising digital innovations to manage and accelerate the transition to a circular plastic economy (CPE). This book is organised into three sections bringing together discussion of environmental conditions, operational dimensions and country case studies of digital transformation towards the circular plastic economy. It explores the environment for digitisation in the circular economy, bringing together perspectives from practitioners in academia, innovation, policy, civil society and government agencies. The book also highlights specific country case studies in relation to the development and implementation of different innovative ideas to drive the circular plastic economy across the three sub-Saharan African regions. Finally, the book interrogates the policy dimensions and practitioner perspectives towards a digitally enabled circular plastic economy. Written for a wide range of readers across academia, policy and practice, including researchers, students, small and medium enterprises (SMEs), digital entrepreneurs, non-governmental organisations (NGOs) and multilateral agencies, policymakers and public officials, this book offers unique insights into complex, multilayered issues relating to the production and management of plastic waste and highlights how digital innovations can drive the transition to the circular plastic economy in Africa. The Open Access version of this book, available at <http://www.taylorfrancis.com>, has been made available under a Creative Commons Attribution-Non Commercial-No Derivatives (CC-BY-NC-ND) 4.0 license.

2018 waste management open: Waste-to-Energy Abd El-Fatah Abomohra, Qingyuan Wang, Jin Huang, 2022-02-08 This book addresses the needs of students, researchers, as well as engineers and other professionals or readers interested in recent advances of biofuel and efficient waste management. In the context of energy consumption, over 85% of the total consumed energy comes from non-renewable fossil resources. Developing new renewable energy resources, especially biofuel production from wastes, has received increasing attention. The book is organized into three sections, namely Section I: Conventional waste management; Section II: From waste to green energy; and Section III: Case studies and future perspectives. Each section presents topic-specific chapters, which contain comprehensive and advanced knowledge of the subjects. Overall, the book covers the recent advances, breakthroughs, challenges, and future perspectives of waste-to-energy approach using different kinds of wastes as a feedstock for alternative biofuels and other integrated approaches such as wastewater treatment, plastic degradation, and CO₂ sequestration in a cost-effective and eco-friendly way. In addition, different routes of waste recycling for enhanced biofuel production and case studies are presented with environmental and economic analysis. The presented case studies and future perspectives under Section III complement the chapters as they are authored by experts from bioenergy businesses who actually encounter real-world problems.

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Thangaprakash Sengodan, M. Murugappan, Sanjay Misra, 2020-09-07 The book comprises select proceedings of the first International Conference on Advances in Electrical and Computer Technologies 2019 (ICAECT 2019). The papers presented in this book are peer reviewed and cover wide range of topics in Electrical and Computer Engineering fields. This book contains the papers presenting the latest developments in the areas of Electrical, Electronics, Communication systems and Computer Science such as smart grids, soft computing techniques in power systems, smart energy management systems, power electronics, feedback control systems, biomedical engineering, geo informative systems, grid computing, data mining, image and signal processing, video processing, computer vision, pattern recognition, cloud computing, pervasive computing, intelligent systems, artificial intelligence, neural network and fuzzy logic, broad band communication, mobile and optical communication, network security, VLSI, embedded systems, optical networks and wireless communication. This book will be of great use to the researchers and students in the areas of Electrical and Electronics Engineering, Communication systems and Computer Science.

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