

Research Notes Letter

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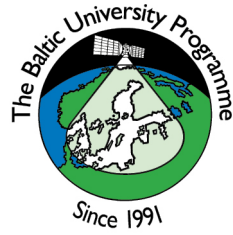
*Research & Innovation for
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This issue of the Research Notes Letter contains 14 scientific abstracts on current research conducted at [BUP participating universities](#). The Research Notes Letter aims to publish primarily multi- and interdisciplinary science related to sustainability and the Sustainable Development Goals indicated by the United Nations 2030 Agenda for Sustainable Development. All previous issues of the Research Notes Letter are available for download from the BUP website.

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We publish the Research Notes Letter up to three times per year and disseminate it in the BUP, reaching thousands of colleagues. The Research Notes Letter highlights abstracts on recent publications relating to the Baltic Sea Region and our ten BUP Themes. We promote research from our participating universities. The abstracts presented in the Research Notes Letter are accompanied by authors, information on their affiliation, keywords, citation and a link to the full paper.

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Editor

Adam Söderberg

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Experiencing islands: is sustainability reported in tourists' online reviews?

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Type of publication: Article peer review



Abstract:

Sustainable experiences are a key component of functioning sustainable destinations. Therefore, it is important to know the spectrum of tourist experiences to determine whether sustainable experiences are present in them. The article aims to analyse the experiences gained and shared via TripAdvisor by tourists visiting three Baltic islands: Wolin, Bornholm and Gotland. The researchers used mixed methods: quantitative (text mining) and qualitative (narrative research). All reviews posted on TripAdvisor concerning the islands' tourist attractions have been scraped. Many experiences related to sustainability were found to differentiate between the studied islands. Most of the sustainable experiences were related to nature, forests and plants. The atmosphere and authenticity distinguish the experiences in Bornholm, the forest and wildlife in Wolin, and plants and flowers in Gotland. The example of the studied islands shows that effective targeting of sustainable tourism in these destinations still requires a lot of effort, including well-thought-out designing of tourist experiences.

Keywords: (sustainable) experiences, tripadvisor, text mining, tourism, Baltic islands

Citation:

Nowacki, M., & Kowalczyk-Anioł, J. (2023). Experiencing islands: is sustainability reported in tourists' online reviews?. *Journal of Ecotourism*, 22(1), 59-79. <https://doi.org/10.1080/14724049.2022.2041648>

Social Innovations for Improving Compostable Packaging Waste Management in CE: A Multi-Solution Perspective

Authors: Grażyna Kędzia¹, Barbara Ocicka², Aneta Pluta-Zaremba², Marta Raźniewska¹, Jolanta Turek², Beata Wieteska-Rosiak¹

Affiliation: 1) University of Lodz, 2) Warsaw School of Economics (SGH)

Type of publication: Article peer review



Abstract:

Compostable packaging is one of the innovative alternatives to conventional packaging. This is also an opportunity in view of the current energy crisis and rising oil prices, firstly, because compostable packaging is produced only from renewable resources, and secondly, it can feed both the composting process and biogas plants. According to the CE principles, it is vital to effectively close product life cycles. Therefore, this paper is aimed at expounding the triggering role of social innovations co-created by stakeholders for improving compostable packaging waste management in accordance with the CE concept. The research procedure consisted of four integrated research phases. A qualitative study was undertaken by conducting 29 in-depth interviews and 3 Social Innovation Labs, engaging 67 bio-packaging market stakeholders, which are national and international companies (e.g., manufacturing, distributing), institutions and other organisations from the social, public and private sectors. The results show that one of the key problems for the development of the CE compostable packaging market is the low level of compostable waste packaging management. Its detailed analysis showed that this problem is associated with several barriers and their numerous causes. According to stakeholders, this can be effectively minimised by applying three social innovations that when combined stimulate all elements of waste management, moving it to a higher level of development.

Keywords: circular economy, organic recycling, packaging life cycle, waste management, social innovation, composting, plastic pollution

Citation:

Kędzia, G., Ocicka, B., Pluta-Zaremba, A., Raźniewska, M., Turek, J., & Wieteska-Rosiak, B. (2022). Social Innovations for Improving Compostable Packaging Waste Management in CE: A Multi-Solution Perspective. *Energies*, 15(23), 9119. <https://doi.org/10.3390/en15239119>

When energy justice is contested: A systematic review of a decade of research on Sweden's conflicted energy landscape

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Affiliation: 1) Lund University, 2) Norwegian University of Science and Technology (NTNU)

Type of publication: Article peer review



Abstract:

The way in which we produce and consume energy has profound implications for our societies. How we configure our energy systems determines not only our chances of successfully dealing with climate change but also, how benefits and burdens of these systems are distributed. In this paper, we set out to map the literature on conflicts related to the energy system in Sweden using a framework of energy justice. The purpose of this exercise is twofold: first, to identify and understand energy conflicts in Sweden through the research that is published; and second, to identify gaps in the literature on energy justice in Sweden. This systematic review builds upon 40 scholarly articles focusing on energy conflicts in Sweden. All articles were written in the time period from January 2010 to January 2021. All articles were published in English in peer-reviewed scientific journals. The papers were analysed using a framework for energy justice that focused on the elements of distributional and procedural justice and recognition justice. The findings of the review suggest that there has been little explicit focus on energy justice in the literature on Sweden's energy system. Issues of distributional justice are most raised and procedural and recognition justice are often conflated in research. While conflicts over hydropower and nuclear have dominated in the past, wind energy in Sami territory is most problematised in the reviewed literature. The understanding of justice in the Swedish energy system is currently missing two elements: a rigorous handling of ecologically unequal exchange and restorative justice.

Keywords: Energy justice, Conflicts, Sweden, Systematic review, Distributional justice, Procedural justice, Recognition justice

Citation:

Ramasar, V., Busch, H., Brandstedt, E., & Rudus, K. (2022). When energy justice is contested: A systematic review of a decade of research on Sweden's conflicted energy landscape. *Energy Research & Social Science*, 94, 102862. <https://doi.org/10.1016/j.erss.2022.102862>

A critical review of disproportionality in loss and damage from climate change

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Affiliation: 1) Lund University

Type of publication: Article peer review



Abstract:

The notion of disproportionate impacts of climate change on certain groups and regions has long been a part of policy debates and scientific inquiry, and was instrumental to the emergence of the “Loss and Damage” (L&D) policy agenda in international negotiations on climate change. Yet, ‘disproportionality’ remains relatively undefined and implicit in science on loss and damage from climate change. A coherent theoretical basis of disproportionality is needed for advancing science and policy on loss and damage. It is necessary to ask: What is disproportionate, to whom, and in relation to what? We critically examine the uses of disproportionality in loss and damage scholarship by analyzing how disproportionality is treated in the literature conceptually, methodologically, and empirically. We review publications against a set of criteria derived from seminal work on disproportionality in other fields, mainly environmental justice and disaster studies that have analyzed environment–society interactions. We find disproportionality to be dynamic and multidimensional, spanning the themes of risks, impacts, and burdens. Our results show that while the concept is often used in loss and damage scholarship, its use relies on unarticulated notions of justice and often lacks conceptual, methodological and empirical grounding. Disproportionality also appears as a boundary concept, enabling critical and multiscale explorations of historical processes that shape the uneven impacts of climate change, alongside social justice and normative claims for desired futures. This emerging area of science offers an opportunity to critically re-evaluate the conceptualization of the relationship between climate-change-related impacts, development, and inequality.

Keywords: climate change, climate justice, development, inequality, loss and damage

Citation:

Dorkenoo, K., Scown, M., & Boyd, E. (2022). A critical review of disproportionality in loss and damage from climate change. *Wiley Interdisciplinary Reviews: Climate Change*, 13(4), e770. <https://doi.org/10.1002/wcc.770>

The Interconnectedness of the Level of Education and Gender Equality in Selected Countries

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Type of publication: Article peer review



Abstract:

The Sustainable Development Goals (SDGs) cover different human and planet well-being areas, and their achievement is interdependent. Which of the goals are crucial and leading in this process is a question that often arises. Quality education is considered a cornerstone for all the SDGs. On the other hand, gender equality is very connected with other goals, as most of them have gender-specific indicators. Quality education and gender equality are two of the SDGs in the social dimension that can reinforce the achievement of all other SDGs. However, quantitative research on the relationship between these two phenomena, taking into account other factors, is rarely taken in the literature. This article aims to fill this gap and investigate the nature of the interconnectedness of quality education and gender inequality in selected countries. We also examined other factors (i.e., economic, political, and cultural) that may influence the education level, gender equality problems, and the relationship between them. The methodology used in the research is the propensity score method, and the data cover 153 countries in the world. The results confirm the undisputable relationship between the level of education and gender equality but also identify other factors influencing the variables of interest. These are GDP per capita, level of democracy, and major religion, to name a few. The influence of these factors differs in strength and direction.

Keywords: Gender inequality, propensity score matching (PSM), quality education, sustainable development goals (SDGs)

Citation:

Górska, R. (2023). The Interconnectedness of the Level of Education and Gender Equality in Selected Countries. *Economics and Business*, 37(1), 1-14. <https://doi.org/10.2478/eb-2023-0001>

A comprehensive study of buckwheat husk co-pelletization for utilization via combustion

Authors: Magdalena Joka Yildiz¹, Paweł Cwalina¹, Sławomir Obidziński¹

Affiliation: 1) Białystok University of Technology

Type of publication: Article peer review



Abstract:

Buckwheat husks are a valuable source of carbon and show the potential to be used as an energy source. However, due to low bulk density and low susceptibility to compaction, it is beneficial to use them in the form of co-pellets. The study presents comprehensive research detailing buckwheat husks' potential for co-pelletization with oily (peanut husks) and dusty (senna leaves) agri-food wastes, whereas the effect of material parameters such as the amount of additive (10, 15, 20%) and the process parameters as the die rotational speed (170, 220, 270 rpm) on pellets' quality (kinetic durability, bulk and particle density, degree of compaction) and the energy consumption of the pelletization process were examined. Ten percent of potato pulp as a binder was added to each pelletized mixture. It was found that an increase in the senna leaf content affects positively the kinetic durability of pellets. The fatty peanut husks have a negative effect on the pellets' quality (measured by the kinetic durability and bulk density); however, both additions of senna leaves and peanut husks are lowering the energy consumption of the pelletizer. The highest quality pellets and the addition of 10% peanut husks to buckwheat husks (kinetic durability of 96%) and 20% of senna leaves to buckwheat husks (kinetic durability of 92%) obtained at 170 rpm were subjected to combustion in a fixed-bed unit, and the content of CO, CO₂, NO, SO₂, HCl, and O₂ in the fuel gases was measured. The emission factors were higher than the Ecodesign limitations (CO > 500 mg·Nm⁻³, NO > 200 mg·Nm⁻³). The obtained results indicate that buckwheat husks can be successfully co-pelletized with other waste biomass; however, the pellets to be combusted require a boiler with improved air-supplying construction.

Keywords: Buckwheat husks, Pelletization, Waste-to-energy, Combustion, Emissions

Citation:

Joka Yildiz, M., Cwalina, P., & Obidziński, S. (2022). A comprehensive study of buckwheat husk co-pelletization for utilization via combustion. *Biomass Conversion and Biorefinery*, 1-18. <https://doi.org/10.1007/s13399-022-03552-4>

Sustainability Aspects of the Construction Industry and Entrepreneurship: Challenges and Opportunities

Authors: Linda Kauškale¹, Jānis Zvirgzdiņš¹, Ineta Geipele¹

Affiliation: 1) Riga Technical University

Type of publication: Article peer review



Abstract:

The relevance of the research and its significance are being determined by the fact that changes in economic and environmental development could affect the tendencies of the development of the real estate market and construction industry, and entrepreneurship within these sectors, and vice versa. As time passes, the participants of real estate sectors face numerous challenges, and it could be useful to find the possible improvement opportunities for economic analysis and management. The aim of the research is to analyse the factors affecting the real estate market, construction industry and related entrepreneurship in changing environment in the context of sustainable economic and environmental development, paying particular attention to the tendencies within these sectors. The literature, historical, comparative analysis and logical access methods have been used in the research. The conducted analysis could help in the improvement of the entrepreneurial activities for the sustainable development of the real estate market and construction industry.

Keywords: changing environment, economic sustainability, entrepreneurial aspects, real estate development, real estate entrepreneurship, real estate market, sustainable construction

Citation:

Kauškale, L., Zvirgzdiņš, J., & Geipele, I. (2023). Sustainability Aspects of the Construction Industry and Entrepreneurship: Challenges and Opportunities. *European Journal of Sustainable Development*, 12(2), 161-161. <https://doi.org/10.14207/ejsd.2023.v12n2p161>
<https://ojs.ecsdev.org/index.php/ejsd/article/view/1396>

Circular Economy in Tourism: A System-Level Approach

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Affiliation: 1) Satakunta University of Applied Sciences

Type of publication: Conference paper



Abstract:

Tourism is a sector where circular economy unfolds extensive opportunities. Despite being classified as a service sector, tourism depends on significant quantities and flows of exhaustible natural resources. As a result, circular economy in tourism has become an emerging field of study. This can also be ascribed to the fact that the topic of circular economy is currently high on the political agenda, especially in Europe. Because circular economy is receiving exponential attention from policy makers, it has also received more interest among tourism scholars. The aim of this paper is to increase understanding of circular economy in tourism research considering its systemic nature. The paper is based on a review of the scientific articles published in the years 2015-2022. The research question is: What are the recent developments and trends in the research on CE in tourism from a system-level approach? The findings indicate that the previous studies have mainly focused on the micro level from the environmental and business management perspectives in the hospitality sector. However, there are many emerging research themes, for example circular consumption behaviour, circular economy and smart tourism. In addition, other types of tourism companies should be considered, e.g., spas, events, and programme service providers. It is evident that more research is required on the meso and macro levels. In all levels, more attention should be paid on the social and cultural aspects of circular economy in tourism.

Keywords: Circular tourism, Circular economy, Sustainable tourism, Circular practices

Citation:

Renfors, S. M. (2023, May). Circular Economy in Tourism: A System-Level Approach. In *International Conference on Tourism Research* (Vol. 6, No. 1, pp. 261-266). <https://doi.org/10.34190/ictr.6.1.1171>

A pedagogical framework to promote sustainable financial literacy in competence-based vocational secondary education and training: The SuFi project case

Authors: Ieva Margeviča-Grinberga¹, Sandra Lake¹, Tamara Pigozne¹, Jani Siirilä², Svetlana Surikova¹

Affiliation: 1) University of Latvia, 2) Haaga-Helia University of Applied Sciences

Type of publication: Article peer review



Abstract:

This article analysed scientific literature and normative documents to design a pedagogical framework for promoting sustainable financial literacy in competence-based vocational secondary education and training within the Interreg Central Baltic project “Sustainability in Finance – SuFi”. An empirical study was conducted in 2020–2021 that involved observing and analysing ideation, elaboration, and piloting processes for an open online module on sustainability issues in vocational business education and training within the SuFi project. The study analysed structured interview responses from nine SuFi project participants; the qualitative data analysis design for the same was based on grounded theory and a constant comparative method. The pedagogical approaches to promoting sustainable financial literacy are described and a systematic, comprehensive, evidence-based proposal is given for promoting sustainable financial literacy in competence-based vocational secondary education and training. The pedagogical framework presented in this article also suggests concrete directions for future pedagogical practice and research.

Keywords: pedagogical approach, sustainable development, sustainable finance, sustainable financial literacy, vocational secondary education and training

Citation:

Margeviča-Grinberga, I., Lake, S., Pigozne, T., Siirilä, J., & Surikova, S. (2023). Un marco pedagógico para promover la competencia financiera sostenible en la educación y formación

profesional secundaria: El caso del proyecto SuFi. *Aula Abierta*, 52(1), 61–70.
<https://doi.org/10.17811/rife.52.1.2023.61-70>

Economic Challenges Of Sustainable Development Goals In Ukraine

Authors: Olena Lytvyn¹, Andrii Onyshchenko², Oleksandr Ostapenko²

Affiliation: 1) National Aviation University, 2) Taras Shevchenko National University of Kyiv

Type of publication: Article peer review



Abstract:

The United Nations 2030 Agenda and its Sustainable Development Goals pose new challenges for Ukrainian businesses, which need to adapt their operations and strategies to the requirements of the SDGs. The purpose of this paper is to highlight the role of economic challenges and business opportunities of the SDGs for the Ukrainian economy. In particular, it assesses whether the SDGs can realistically be achieved after the COVID-19 pandemic and the war with the Russian Federation. Methodology. More generally, the framework allows to assess the macroeconomic coherence with the development strategies of Ukraine. The basic trends of the SDGs for Ukraine are summarized, and the estimation model of the progress in achieving the SDGs is carried out. The impact of the COVID-19 pandemic on the economy of Ukraine is studied. Results. The results show that the economic challenges after the COVID-19 pandemic and the war include ethical, social, financial, and legal aspects that meet the requirements of sustainable development, which is a very high priority for the community in Ukraine. Practical implications. A comparative analysis of the activity of Ukrainian enterprises during quarantine is made on the basis of research data and those for official statistics. Value/originality. According to this study, Ukraine will need 5-7 years to regain the potential lost during the COVID-19 pandemic and the war. The actions of the government and the National Bank of Ukraine continue to support the economic mitigation of the negative effects of the war. The research is based on the economic issues that show how the SDGs can be achieved in the country under different policy scenarios, including modernization of production, development of innovation, increasing export potential, and support from the international community, especially the EU and the US. The assessment of the progress in the implementation of the SDGs in Ukraine showed their significant indicators, such as: The share of exports of goods whose production uses technologies of high and medium-high level in the total exports of goods; Ukraine's position as assessed by the Global Innovation Index; the increase in employment; the creation of institutional and financial capacities for self-realization of the potential of the economically active population and the development of the creative economy; Development of high-quality, reliable, sustainable and accessible infrastructure based on the use

of innovative technologies, including environmentally friendly means of transport; ensuring the development of sustainable food production systems that contribute to the preservation of ecosystems and the gradual improvement of the quality of land and soil, primarily through innovative technologies; doubling agricultural productivity, primarily through innovative technologies; mobilization of additional financial resources through the promotion of foreign and domestic investment. Other SDGs showed low improvement and likelihood.

Keywords: economic challenges, sustainable development goals, estimation model of SDGs' achievement progress, COVID-19 pandemic, war

Citation:

Lytvyn, O., Onyshchenko, A., & Ostapenko, O. (2023). Economic Challenges Of Sustainable Development Goals In Ukraine. *Baltic Journal of Economic Studies*, 9(1), 100-112. <https://doi.org/10.30525/2256-0742/2023-9-1-100-112>

Exploring the Common Ground of Sustainability and Resilience in the Building Sector: A Systematic Literature Review and Analysis of Building Rating Systems

Authors: Licia Felicioni^{1,2}, Antonín Lupíšek¹, Jacopo Gaspari²

Affiliation: 1) Czech Technical University in Prague, 2) University of Bologna

Type of publication: Article peer review



Abstract:

Over the last ten years, due to the increase in frequency and severity of climate change effects, resilience in buildings has become a growing topic in the current global discussion on climate change adaptation. Designing both sustainable and resilient constructions would help to face such effects; however, sustainability and resilience in design have been mostly treated separately so far. Since sustainability has been considered more than resilience, paying deeper attention to the latter is indispensable to reducing building vulnerability. The purpose of this article is to examine the commonalities between the sustainability and resilience of buildings using two different approaches: (i) a systematic literature review, taking into consideration a 10-year period for selecting records, and (ii) an analysis of five green building rating systems and five resilience rating systems and guidelines selected according to their popularity and number of certified buildings. There is an overlap in some indicators between the two domains at the building level, as shown by the results from both paths. These aspects could assist in considering sustainability and resilience from the very beginning of the design process. This will ensure that buildings may be designed more effectively by considering and enhancing the synergies between the two domains. This paper targets potential stakeholders who may be interested in including such an integrated implementation in their designs.

Keywords: sustainability, resilience, buildings, rating systems, literature review, commonalities, building design, GBRs, RRSs, clustering process

Citation:

Felicioni, L., Lupíšek, A., & Gaspari, J. (2023). Exploring the Common Ground of Sustainability and Resilience in the Building Sector: A Systematic Literature Review and Analysis of Building Rating Systems. *Sustainability*, 15(1), 884. <https://doi.org/10.3390/su15010884>

On the social embeddedness of aeromobility: insights from the ecological self in intimate relationships

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Affiliation: 1) Ruhr University Bochum, 2) Magdeburg-Stendal University of Applied Sciences, 3) International Academy Berlin

Type of publication: Article peer review



Abstract:

In this article the author addresses selected psychosocial aspects experienced, expressed, and negotiated by sustainability-oriented individuals who share an environmental awareness yet at the same time struggle to implement it in their everyday lives. Based on the analysis of interviews conducted with individuals and couples in Germany, the author focuses on individual and joint efforts to deal with ecological challenges in the face of aeromobility in times of climate change. The results indicate the advantage of conceptualizing aeromobility as a sometimes deeply socially embedded practice and thus constitutive reference point for the ecological self in relationships.

Keywords: Climate change, Sustainability, Flying, Negotiation, Qualitative interview, Qualitative research

Citation:

Ruppel, P. S. (2023). On the social embeddedness of aeromobility: insights from the ecological self in intimate relationships. *cultura & psyché*, 1-10. <https://doi.org/10.1007/s43638-023-00064-4>

Environmental Management and Its Impact on CSR Activities in the Field of Sustainable Development

Authors: Petronela Švikruhov¹, Veronika Z^ábojníková¹, Zuzana Kapsdorferová¹

Affiliation: 1) Slovak University of Agriculture in Nitra

Type of publication: Article peer review



Abstract:

The way in which both renewable and non-renewable resources are used, and the speed at which these are being exploited, are rapidly eroding the planet's capacity to regenerate the resources and environmental services on which our prosperity and growth are based. The clothing and textile industry is characterized by a linear (take-make-waste) economic model and huge use of non-renewable resources. In order to integrate circular economy as one of the challenges in the clothing and textile industry, we must boost past research directly to innovation to bring about a higher quality of life for all. Corporate social responsibility (CSR) has gained special importance among researchers, the business community, and customers in recent years. Today, manufacturers have to take another step forward to promote their positive social attitude and take care of their responsibility towards society. In the framework of sustainable development, CSR is carried out by achieving economic, social, or environmental goals. Consumers and shareholders currently expect a responsible approach from clothing and textile companies in the production of sustainable clothing, recycling, or ensuring suitable working conditions for employees. It is important not only to support socially responsible businesses but also to raise awareness of the negative environmental impact of the clothing and textile industry. Based on the recognition of the importance of shifting from a linear to a circular approach in the clothing and textile industry, we see potential in recycling the textile fiber in order to close the loop and use innovative technology to transform the textile waste into recycled material by keeping in mind barriers in technology. This article evaluates the social responsibility of a selected company in the field of sustainable development by setting a good example in the Slovak market through the results of a questionnaire survey.

Keywords: circular economy, clothing industry, CSR, environmental management, sustainable development

Citation:

Švikruhová, P., Zábojníková, V., & Kapsdorferová, Z. Environmental Management and Its Impact on CSR Activities in the Field of Sustainable Development. *TalTech Journal of European Studies*, 13(1), 63-86. <https://doi.org/10.2478/bjes-2023-0004>

Case Study-Based Integrated Assessment of Former Waste Disposal Sites Transformed to Green Space in Terms of Ecosystem Services and Land Assets Recovery

Authors: Zane Vincevica-Gaile¹, Juris Burlakovs², Maija Fonteina-Kazeka^{1,3}, Magdalena Wdowin², Emil Hanc², Vita Rudovica¹, Maris Krievans¹, Inga Grinfelde⁴, Kristaps Siltumens⁴, Mait Kriipsalu⁵, Hani Amir Aouissi⁶, Aissam Gaagai⁶, Muhammad Zahoor⁷

Affiliation: 1) University of Latvia, 2) Polish Academy of Sciences, 3) Association “Baltic Coasts”, 4) Latvia University of Life Sciences and Technologies, 5) Estonian University of Life Sciences, 6) Scientific and Technical Research Centre on Arid Regions (CRSTRA), 7) University of Malakand

Type of publication: Article peer review



Abstract:

Growing global production leads to continuing generation of waste, part of which still ends its life cycle in landfills and dumps. Despite the efforts of waste reuse and recycling and waste self-degradation, existing and old landfills and dumps remain a huge challenge for the future. The majority of landfills can be identified as non-sanitary and can be designated as existing or former dumps, meaning hills or fields of abandoned garbage and degraded inert waste masses without any or with little aftercare maintenance. In contrast, the term 'landfill' refers to legally organized waste disposal sites created in a controlled manner, according to modern environmentally responsible standards. The paper gives a case study-based integrated assessment of closed and revitalized waste disposal sites that have undergone a functional change from 'lost territories' to primarily green space beneficial for society and the urban environment, in terms of ecosystem services estimation based on the criteria evaluation approach and monetary assessment of land assets value recovery potential. The chosen four case studies (in the United States, Australia, Poland and Estonia) serve as successful examples of a sustainable degraded site revitalization gateway indicating opportunities for accelerating land value through the prism of ecosystem services estimations and spatial planning criteria. Beneficial value of land assets after site revitalization is assessed in monetary terms.

Keywords: closed landfills, ecosystem services, direct market pricing, land resources, land value, old dumps, real estate, revitalization of degraded sites, urban green space

Citation:

Vincevica-Gaile, Z., Burlakovs, J., Fonteina-Kazeka, M., Wdowin, M., Hanc, E., Rudovica, V., ... & Zahoor, M. (2023). Case study-based integrated assessment of former waste disposal sites transformed to green space in terms of ecosystem services and land assets recovery. *Sustainability*, 15(4), 3256. <https://doi.org/10.3390/su15043256>