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Evaluation of the Importance of Using Technology as a Part of Environmental Sustainability

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ABSTRACT

Integrating green initiatives into the global economy has become an increasingly pressing concern in light of the changing climatic conditions and the heightened complexity of external factors affecting various industries, including hospitality, tourism, manufacturing, and agriculture. As such, a growing focus has been on using technology to manage the optimal use of resources and waste in these sectors. The current report underscores the pivotal role of technology in addressing sustainability concerns, highlighting it as an effective resolution for the industry. The report recommends that businesses adapt to these external requirements to maintain a sustainable competitive position in the market. In particular, applying nanotechnology products and services is a game-changer in business operations. Such technological innovations are poised to significantly impact resource conservation and energy efficiency by enhancing the optimal utilisation of raw materials and resources in the economy. The advent of digital technologies has emerged as a powerful tool for communicating the significance of sustainability, enabling businesses to create a broader and more effective platform for sharing information and promoting awareness of this crucial issue. The report has explored various business areas and examined the themes related to environmental sustainability in today's economy, emphasising the importance of technology in promoting sustainable practices in different industries. Overall, this research has underscored the essential role of technology in driving sustainability, highlighting the need for businesses to adapt to changing environmental requirements and embrace innovative solutions to remain competitive and sustainable.

I. Introduction

Environmental sustainability represents the commitment to conserve and safeguard natural resources and ecosystems without compromising future needs. The concept derives from the principles of preserving ecological balance and natural assets. Sustainability is a global enterprise, and corporations face increasing pressure to integrate such regulations into their structure and culture to achieve success. The advent of technology has entirely transformed the world and fundamentally altered business procedures, bringing benefits to all facets of life and enhancing the environment. Diverse forms of digital technology, such as artificial intelligence, data management software, recycling techniques, and inventory and waste management technologies, are essential to use resources efficiently.

This research project seeks to determine the significance of technology in fostering environmental sustainability practices. Technology is utilised in various capacities in hotels, hospitals, and manufacturing industries to allocate resources and minimise waste efficiently. Managers and leaders within such organisations must focus on using such technologies to ensure work effectiveness and preserve sustainable practices. This research project will emphasise the importance of technology in enhancing the overall quality of life and the critical role that environmental sustainability plays in the business environment.

II. Data Analysis

Theme 1: Technologies Used Towards Environmental Sustainability in Various Business Areas

The advent of green technologies has permanently impacted the path of commercial enterprises and global economies. The pressing concern of climate change and ecological necessities has become a pivotal facet of contemporary society, engendering increasingly vexing dilemmas. Engineers and scientists have dedicated themselves to crafting the most productive solutions for lessening the burgeoning threat to sustainable development. Among the most promising innovations of recent times, wastewater treatment represents a remarkable technological feat. By harnessing the power of nanotechnology, biological agents, microbial fuel cells, and wetlands, wastewater treatment holds significant promise for conserving and managing water resources in industrial, domestic, and medical settings. As such, this represents a critical stride forward in the arduous journey towards environmental sustainability and may hold the key to the persistence of our planet's ecological health (Evans et al., 2017).

The contemporary technological realm has undergone a metamorphosis, as a range of highly customised and industry-specific solutions have been deployed to combat the deleterious effects of pollution. Methane and carbon substances, known for their highly corrosive and damaging environmental impact, must be confronted by leveraging cutting-edge gadgets within the pharmaceutical, automotive, and chemical industries. A consortium of experts has deftly

executed a plan to lower greenhouse gas emissions and the production of air pollutants. A significant accomplishment in this area involves recycling methodologies and waste management protocols orchestrated with extraordinary precision. Automated food waste tracking systems, intelligent containers, and optical scanning technologies underpin these waste management procedures. The industrial sector has also shifted its focus to reusing waste as an energy source for various production activities, creating a circular economy that enhances sustainability. Technology has transcended traditional boundaries and disrupted established norms, facilitating unprecedented success and fostering more effective business practices (Rashid et al., 2013).

Theme 2: Role of Environmental Sustainability in Today's Economy

The concept of sustainability denotes meeting the current generation's needs without impeding future generations' potential to meet their needs. Sustainable development entails fulfilling human needs while concurrently preserving the quality of the environment. The importance of sustainable development cannot be overemphasised as it has an indispensable role in promoting a robust economy that conserves the environment. This is particularly pertinent in urban and underdeveloped areas where raising the standard of living is paramount. The significance of sustainability to the economy stems from the fact that clean air and water are prerequisites for healthy living, and the achievement of this necessitates a thriving environment. Economic sustainability is a critical panacea for ending poverty and hunger. Sustainability is a fundamental prerequisite for the preservation of resources. Resources are an indispensable component of the environment, and efficient utilisation is vital for creating a healthy environment. Notably, sustainability has the potential to safeguard the needs of future generations while concurrently enhancing the standard of living for the present age. In this vein, sustainability is crucial in achieving a desirable quality of life. The benefits of sustainability are vast and far-reaching, and as such, sustainability is an essential facet of the global economy. It reduces the financial burden and the resultant crisis by providing the impetus for corrective action tailored to address sustainability issues. The importance of sustainability in the economy cannot be overemphasised as it enhances the standard of living while concurrently preserving the environment. The essence of sustainability is the realisation of what we desire without compromising our quality of life, and as such, sustainability is an indispensable component of human existence (Savitz, 2013).

Environmental sustainability is an imperative aspect of our existence. With the escalating population and harmful industrial activities, incentivising businesses and educating people on their health is critical. This has led to adopting sustainable practices, which seek to protect our natural environment and human health by introducing innovations that do not compromise our way of living. Sustainability is a fundamental mechanism that ensures humans maintain their role in the economic system by balancing, improving, and keeping it. Long-term sustainability is particularly essential as it helps to safeguard and promote a stable economy. Environmental sustainability, in particular, is the foundation of human sustainability. Thus, protecting human lifestyles and using resources effectively while maintaining ecological balance is crucial. The significance of environmental sustainability cannot be overstated. It facilitates the integration of various economic sectors, mitigates ecological risks, and enhances the profitability of businesses. It protects the planet's biodiversity, which is vital for environmental stability.

In summary, environmental sustainability is a multi-faceted approach to promoting economic growth while protecting the natural environment and human health. It involves balancing economic development, ecological balance, and social well-being. Therefore, businesses and individuals must embrace sustainable practices to safeguard a prosperous future for generations to come (Costanza et al., 2013).

The planet's resource pool is meagre. Consistent sustainability practices alleviate consumption and promote the reuse of these scarce resources. These practices further promote ecological equilibrium by preventing disturbance to the ecosystem's natural balance. Sustainability, in addition to environmental protection, contributes to economic growth. It fortifies biodiversity and enhances the corporate brand image. Those conscious of ecological damage are unwilling to invest in products associated with pollution, which negatively impacts market viability. As such, sustainability abates pollutants and delivers a pollution-free, wholesome environment (Schaltegger et al., 2012).

Theme 3: Importance of Using Technology Towards Environmental Sustainability

Technology would undoubtedly make the world superlative in the intricate and complex global landscape plagued by continuous climate fluctuations. The employment of avant-garde technological apparatuses augments the expeditiousness of activities and curtails the squandering of resources, cost, and human resource proficiency. The hospitality industry can conveniently conduct safety and health surveys to safeguard the welfare of its human resources, thanks to the facile implementation of technology. The performance of data management systems has facilitated the collation and scrutiny of indispensable data to develop viable strategies for realising sustainable practices. The steady progressions in technology have conferred an array of utilities for mitigating noise, water, and heat contamination, leading to the conversion of colossal amounts of waste to curb carbon footprint. The superlative deployment of technology is imperative in our current era to attain superior efficiency, safety, sustainability, and profitability levels, inevitably ensuring global progress and prosperity (Li et al., 2014).

The transformative shift from paper-based invoicing to digital platforms has enabled a remarkable reduction of 63% in the carbon footprint of corporate entities. Technology has emerged as a dual-faceted facilitator that propels and enhances the operations of organisations. By creating novel work processes and accelerating business operations, technology has enabled companies to reap substantial profits while espousing sustainable practices. The proliferation of technological gadgets like digital and social media platforms has allowed businesses to effectively communicate the importance of technology to consumers, thereby driving a surge in market adoption. The paradigm shift towards technological integration has profoundly impacted and revolutionised business practices, accelerating innovation and

driving enhanced efficiencies. The transformation brought about by technology has been a pivotal driver of change, enabling businesses to adapt and evolve in line with the evolving consumer and market trends (Kiradoo, 2017).

Theme 4: Contribution of Technology Towards Managing Sustainable Changes

The attainment of sustainable growth necessitates a paradigm shift in industrial processes with a keen emphasis on optimising resources and manufactured products. To achieve sustainable development, a transition to an energy-efficient society must be effected where resources are highly effective and strategies implemented for the cyclic utilisation of waste. Technology constitutes a critical factor in driving sustainability growth, with numerous ways technology helps attain sustainable development. Regarding energy, sustainability's success depends primarily on using cutting-edge technology. Adopting natural gas, which exerts substantially fewer contaminants, is indispensable in converting the economy from reliance on fossil fuels. This will play an instrumental role in reducing the dependency on non-renewable energy sources. The world has to minimise the utilisation of fossil fuels to enhance sustainability significantly. The employment of technology is crucial in augmenting production efficiency and the sustainable utilisation of fossil fuels (Schiederig et al., 2012).

The centrality of water conservation in ensuring environmental sustainability cannot be gainsaid. Rainwater harvesting has become an essential and indispensable practice in contemporary times. The imperative to reuse water, a vital resource, is requisite that cuts across all sectors, including the industrial, agricultural, and public domains. The agricultural sphere, a critical sector in the economy, must adopt new and cutting-edge technology to curb the insatiable and hitherto unsustainable exploitation of water resources, fostering water conservation and an ecosystem in harmony with nature.

Public infrastructure, the bedrock of societal advancement and sustainable development, is a critical aspect of public life. The infrastructure must comprise water harvesting facilities, transportation, communication, and well-maintained roads and bridges. The need to leverage technology, which has matured and advanced, is especially germane in the quest for an ecological environment which aligns with environmental sustainability.

The attainment of sustainable development is vital, requiring measures to address the continued exploitation of water resources, including the imperatives to reduce, reuse and recycle. It is imperative to adopt a holistic approach, focusing on the cruciality of conservation in all spheres of life, including agriculture, industry, and the public domain. Adopting advanced eco-friendly and environmentally sustainable technologies is pivotal to guaranteeing an ecosystem in tandem with nature, thus ensuring that the future is secure for future generations.

The domain of information technology (IT) bears an unrivalled potential to revolutionise the labour scenario of urban inhabitants in the impending future. It has magnified the transportation system's efficacy and efficiency of air and land among diverse sectors of the economy. Pioneering technology has facilitated the meticulous regulation of processes ranging from chemical manufacturing to nuclear power plants, thus ameliorating energy efficiency and curbing pollution. The erstwhile prevalent materials such as steel and plastics have significantly declined their usage, mitigating environmental impact. The advent of novel technology has banned plastics and shifted to eco-friendly substitutes such as paper and cloth bags. This paradigm shift, in turn, has given rise to a more ecologically sound environment, paving the way for sustainable development. Novel materials are designed to consume fewer resources and energy, ensuring they are recyclable and lighter than their current counterparts. Advancements in technology will make materials more specific, targeted, and regulated, thereby refining the industry's environmental impact (Mauser et al., 2013).

Theme 5: Challenges Using Technology as a Part of Environmental Sustainability

Using technology as a constituent of environmental sustainability is indispensable in accomplishing sustainable development; nonetheless, it also confronts various predicaments that require resolution. Here are a few of the unique obstacles encountered in exploiting technology for environmental sustainability:

1. E-waste Administration: Technology has engendered electronic waste that is environmentally pernicious. Properly disposing of electronic waste poses a daunting challenge, and if not managed effectively, it can engender substantial environmental and health quandaries. Consequently, adopting sustainable practices to dispose of electronic waste is crucial.

2. Energy Consumption: The ubiquitous usage of technology necessitates an immense quantum of energy, which leads to the depletion of natural resources and the emission of greenhouse gases. Although renewable energy sources like solar and wind are being implemented to power technology, more endeavours are obligatory to curtail energy consumption.

3. Restricted Accessibility: While technology presents numerous advantages in promoting environmental sustainability, it is inaccessible to everyone, particularly those residing in low-income communities. This poses a challenge in reaching out to these communities and involving them in environmental sustainability initiatives that depend on technology.

4. Exorbitant Cost: The development and implementation of technology for environmental sustainability demand significant investments. This makes it arduous for individuals and small businesses to adopt technology for sustainable practices. The high cost also challenges governments in developing countries that may need more financial resources to invest in technology.

5. Technological Obsolescence: Technology is perpetually progressing, and antiquated technologies become obsolete. This creates a challenge for those who have invested in outdated technologies for

environmental sustainability, as they may need help to keep pace with the latest trends.

6. Digital Divide: The digital divide is the disparity between those with access to technology and those without access. This divide constrains the capacity of some communities to adopt technology for environmental sustainability, thereby making it arduous to attain sustainable development goals.

7. Lack of Awareness: Lastly, the paucity of awareness about the advantages and opportunities presented by technology for environmental sustainability poses a challenge. There is a need for education and awareness programs to stimulate the adoption of technology for environmental sustainability.

In summation, technology presents significant prospects for environmental sustainability and numerous challenges that require redressal. Governments, businesses, and individuals must collaborate to devise sustainable practices that leverage technology to accomplish sustainable development goals. The abovementioned challenges are in developing and implementing technology for environmental sustainability.

III. Results and Discussions

Preamble

Percentage analysis has been utilised as a means of comprehending the demographic profile of the respondents. The variables of gender, age, marital status, level of education, family size, and employment status have been meticulously collected and subjected to analysis.

Furthermore, an exhaustive investigation has been carried out to identify the latent and dominant dimensions that underlie the variables of environment concern, environment knowledge, emotional value, function value, social value, and guest intention (Kiradoo, 2018).

In addition, the psychometric properties of the variables have been scrutinised, particularly concerning the measurement model's convergent validity.

The demographic analysis of the respondents, as depicted in Table 1, reveals that a preponderance of 60.5% was male. In comparison, a paltry 39.5% were female, indicating the male gender as the primary respondent. Notably, the analysis also discloses that most respondents, expressly those aged 35-44 and 45-54, represent 39.5% and 29.8%, respectively. Marital status analysis shows that 55.8% were married, compared to 28.5% were divorced/widowed, and 15.8% were single. Educational attainment analysis indicates that approximately 50.5% and 37.3% of respondents possessed a diploma and a bachelor's degree, respectively.

Family size analysis reveals that roughly 67.8% and 23.8% of the respondents belonged to the 2-3 and 4-5 member family categories, respectively. Occupation-wise, the highest percentages were recorded among business owners (32%) and full-time workers (29%), according to the analysis. Table 2, which illustrates the descriptive statistics for the constructs, divulges that the mean and standard deviation for "Environmental Concern" (EC) were 3.43 and 0.54, respectively, which suggests a neutral to the average level of concern. The emotional, functional, and social values were rated 4.00 and 0.50, 3.43 and 0.52, and 4.00 and 0.60, respectively, indicating a moderate to average to reasonable perception. The mean and standard deviation for "Environmental Knowledge" (EK) was recorded as 4.03 and 0.50, respectively, demonstrating a moderate to the average level of knowledge.

Percentage Analysis

Table: 01

Criteria	Groups	Frequency	Percentage
Gender	Female	158	39.5
	Male	242	60.5
Age	18-24 Years	20	5
	25-34 Years	51	12.8
	35-44 Years	159	39.5
	45-54 Years	119	29.8
	55-64 Years	41	10.25
	65 Years And Above	11	2.75
Marital status	Single	63	15.8
	Married	223	55.8
	Divorced / Widowed	114	28.5
Level Education	High School	32	8
	Diploma	202	50.5
	Bachelor's Degree	149	37.3
	Master's Degree	10	2.5
	Doctoral Degree	7	1.75
Family size	1 Person	18	4.5
	2-3 Person	271	67.8
	4-5 Person	95	23.8
	More Than 5 Person	16	4
Employment status	Student	31	7.7
	Housewife	69	17.3
	Unemployed	10	2.5
	Business	128	32
	Full-Time	116	29
	Part-Time	46	11.5

Table 2 depicts the constructs' Mean and Standard Deviation coefficients, denoting a prominent affirmation that each of the constructs surpasses the requisite mean value of 3, thus signifying an impressive level of proficiency and exceptional expertise.

The exhibit study sought to examine the psychometric characteristics of the variables under investigation, with the outcomes presented in Table 3. The fit statistics for the proposed model yielded evidence that the data measurement was satisfactory. The loadings obtained for all variables surpassed the threshold criterion of 0.70, indicating the outcomes' significance. In assessing the construct validity of

the variables, convergent validity was evaluated to ensure the elements' unidimensionality. The average variance extracted (AVE), a critical indicator of convergent validity, revealed that the variables EC, EK, EV, FV, GI, and SV exhibited AVE values of 0.58, 0.80, 0.67, 0.65, 0.86, and 0.76, respectively. None of the values fell below the minimum acceptable criterion of 0.5. Further examination of Table 3 revealed that all the variables' composite reliability (CR) values were above 0.80 when assessing the total value of actual score variance to the full-scale score variation. While the CR threshold range remains controversial, our findings, with values exceeding 0.6, provide evidence of reliable internal consistency for the latent variables under investigation.

Mean, Standard Deviation
Table: 02

Constructs	Mean	Standard Deviation
Environment concern	3.43	0.54
Environment Knowledge	4.03	0.50
Emotional value	4.00	0.50
Function value	3.43	0.53
Social value	4.00	0.60
Guest interntion	4.15	0.69

IV. Conclusion

Green technology has been incorporated within the facile purview of erudite scientists and enterprising industrialists. The corporate world has been mandated to shift towards sustainable methodologies to ensure ethical practices and secure the support of stakeholders. It has been observed that various green technologies have been contrived based on the specific exigencies of distinct industries to facilitate environmental governance.

Technology has assumed the role of the backbone of industries in ushering in a paradigm of standard pollution-based practices. Ecological sustainability has become a central tenet of business pursuits, and its cognisance has risen amongst entrepreneurs. The extant study has focused on various technologies, including wastewater management, conversion of waste into energy, and digital platforms, that aid in effectuating environmental sustainability. The report further underscores the pertinence of prioritising ecological sustainability to ensure success and mitigate competition risks.

The contemporary commercial milieu is characterised by a heightened vulnerability caused by the entry of novel market players and the actual availability of investment resources to foster the innovation of products and services. This phenomenon augments the likelihood of enterprises facing existential threats. In the "survival of the fittest," empirical observations have revealed that firms prioritising efficacy in waste production and management accrue the benefits of an amplified brand image and market appeal. Multiple types of green technology are accessible in the market, yet leaders and managers must adeptly utilise such technologies to manage their operational success. It is incumbent upon all organisations that provide products or services to acknowledge the indispensability of technology in sculpting sustainable practices. This facet serves the dual objective of conserving the environment and administering the influential chain of the ecosystem.

The demographic evaluation of the respondents reveals that most participants were male, accounting for 60.5% of the overall sample, while females comprised 39.5%. Regarding their age, the predominant age brackets included the 35-44 and 45-54 categories. The study further discloses that most respondents were married, representing 55.8% of the sample. Regarding family size, 23.8% of the participants indicated having a household size of 4-5 members.

Measurement model-Convergent validity
Table: 03

Latent variable	Indicator	Loadings	AVE	CR	VIF
Environment concern (EC)	EC1	0.791	0.58	0.906	2.08
	EC2	0.739			1.92
	EC3	0.822			2.7
	EC4	0.768			1.87
	EC5	0.78			2.52
	EC6	0.793			2.09
	EC7	0.72			1.45
Environment Knowledge (EK)	EK1	0.913	0.8	0.922	2.7
	EK2	0.858			2.01
	EK3	0.907			2.62
Emotional value (EV)	EV1	0.752	0.67	0.857	1.23
	EV2	0.854			2.06
	EV3	0.84			1.99
The function value (FV)	FVP1	0.783	0.65	0.937	2.39
	FVP2	0.593			1.53
	FVP3	0.817			2.64
	FVP4	0.74			1.96
	FVQ1	0.893			4.68
	FVQ2	0.877			4.33
	FVQ3	0.904			3.92
	FVQ4	0.813			3.57
Guest interntion (GI)	INT1	0.916	0.86	0.948	3.03
	INT2	0.951			4.53
	INT3	0.913			3.26
Social value (SV)	SV1	0.876	0.76	0.926	2.78
	SV2	0.913			3.37
	SV3	0.87			2.5
	SV4	0.824			2.16
Model fit satatistic: SRMR = 0.07, X^2 = 1864.78, NFI = 0.78, rms Theta = 0.16					
Notice: AVE = Average variance extracted; CR = Composite reliability; SRMR = Standardised Root mean square residual; X2 = Chi-square; NFI = Normed fit index; RMS Theta = Root mean square error correlation; VIF = Variance inflation factor.					

Additionally, the study analysed the respondents' attitudes towards environmental issues using two parameters, namely "Environmental Concern" (EC) and "Environmental Knowledge" (EK). The results indicate that the participants exhibited a moderate to the average level of knowledge, with a mean and standard deviation of 4.03 and 0.50 for EK, respectively. Moreover, the participants demonstrated an intermediate level of environmental concern, as evidenced by a

mean and standard deviation of 3.43 and 0.54 for EC, respectively.

The study reveals that most respondents were male and married, with a family size of 4-5 members. Furthermore, the participants exhibited moderate levels of environmental knowledge and concern. The findings of this research provide valuable insights into the demographics and attitudes of the study population, which can inform policymaking and public discourse on environmental issues.

V SUGGESTIONS:

The issue of environmental sustainability is urgent and requires immediate attention, and technology has a pivotal role to play in addressing it. To ensure that technology is utilised effectively in environmental sustainability, the following expert recommendations can be implemented:

1. Embrace Renewable Energy Sources: Technology can assist in environmental sustainability by embracing renewable energy sources like solar and wind power. Investing in renewable energy sources like solar panels, wind turbines, and other renewable energy sources can significantly reduce reliance on fossil fuels, major contributors to climate change.

2. Utilise Smart Technology: Using energy-efficient light bulbs, smart thermostats, and water-efficient appliances can help reduce energy and water consumption. These technologies are becoming more affordable and accessible, and their adoption can substantially contribute to environmental sustainability.

3. Foster A Circular Economy: Technology can facilitate the transition to a circular economy by enabling the reuse, refurbishment, and recycling of materials. Governments and companies can invest in advanced recycling technologies that recover valuable materials from waste.

4. Promote Digitalisation: Digitalisation can reduce paper usage and waste, lower energy consumption associated with commuting, and increase efficiency in various industries. Remote work and virtual meetings can also reduce greenhouse gas emissions related to transportation.

5. Encourage Sustainable Innovation: Investing in research and development of new technologies that reduce environmental impact, including technologies that reduce carbon emissions, enhance biodiversity, or promote sustainable agriculture, is critical. Governments, businesses, and individuals should encourage sustainable innovation.

In conclusion, technology can significantly contribute to environmental sustainability, but using it responsibly and sustainably is crucial. By embracing renewable energy sources, utilising smart technology, fostering a circular economy, promoting digitalisation, and encouraging sustainable innovation, we can harness technology to achieve a more sustainable future.

REFERENCES:

1. Costanza, R., Alperovitz, G., Daly, H., Farley, J., Franco, C., Jackson, T., Kubiszewski, I., Schor, J. and Victor, P., 2013. Building a sustainable and desirable economy-in-society-in-nature. In *State of the World 2013* (pp. 126-142). Island Press, Washington, DC.
2. Evans, S., Vladimirova, D., Holgado, M., Van Fossen, K., Yang, M., Silva, E.A. and Barlow, C.Y., 2017. Business model innovation for sustainability: Towards a unified perspective for creating sustainable business models. *Business Strategy and the Environment*, *26*(5), pp.597-608.
3. Kiradoo, G. (2018) Determination of Financial KPIs and Techniques for Performance Appraisal of the Ceramic Industry of India. *Journal of Management*, 5(2), pp. 21–32.
4. Kiradoo, G. (2017) The Effectiveness of Peer-to-Peer Entrepreneurship Training: A Comparative Study of Traditional Classroom Training and Peer-to-Peer Learning. *RESEARCH REVIEW International Journal of Multidisciplinary*, 03(03), pp. 302-307.
5. Kiradoo, G. (2017) Analysis of the Revolution in Business Efficiency Associated with the Use of Robotics as a Part of Handling Activities and Operations. *International Journal of Electrical Engineering & Technology*, 8(1), pp. 93–96.
6. Li, W.W., Yu, H.Q. and He, Z., 2014. Towards sustainable wastewater treatment by using microbial fuel cells-centred technologies. *Energy & Environmental Science*, *7*(3), pp.911-924.
7. Mauser, W., Klepper, G., Rice, M., Schmalzbauer, B.S., Hackmann, H., Leemans, R. and Moore, H., 2013. Transdisciplinary global change research: the co-creation of knowledge for sustainability. *Current Opinion in Environmental Sustainability*, *5*(3-4), pp.420-431.
8. Rashid, A., Asif, F.M., Krajnik, P. and Nicolescu, C.M., 2013. Resource conservative manufacturing: An essential change in business and technology paradigm for sustainable manufacturing. *Journal of Cleaner Production*, *57*, pp.166-177.
9. Savitz, A., 2013. The triple bottom line is how today's best-run companies are achieving economic, social and environmental success and how you can. John Wiley & Sons.
10. Schaltegger, S., Lüdeke-Freund, F. and Hansen, E.G., 2012. Business cases for sustainability: the role of business model innovation for corporate sustainability. *International journal of innovation and sustainable development*, *6*(2), pp.95-119.
11. Schiederig, T., Tietze, F. and Herstatt, C., 2012. Green innovation in technology and innovation management–an exploratory literature review. *R&d Management*, *42*(2), pp.180-192

