

EXPLORING THE POSTGRADUATES' ACKNOWLEDGEMENT AND IMPLEMENTATIONS REGARDING SD (SUSTAINABLE DEVELOPMENT): A RELATIONSHIP STUDY

Shazia Murtaza^{*1}, Hina Wishal², Muhammad Munsif³, Ishaq Amanat⁴

^{*1}M.phil Scholar University of Education, Lahore; ²M.Phil Scholar University of the Punjab; ³PhD Scholar University of the Punjab; ⁴Lecturer in Education Govt.college Phool Nagar HED Punjab

^{*1}shzvirk@gmail.com; ²h.wishalacqua123@gmail.com; ³muhammadmunsif@gmail.com

Corresponding authors*

Received: August 05, 2024 Revised: September 05, 2024 Accepted: September 20, 2024 Published: September 28, 2024

ABSTRACT

Current research is an attempt to scrutinize acknowledgement and implementation regarding SD among the postgraduates in district Lahore. Research on education for sustainable development awareness and practice has been gaining the momentum, especially with the urgency of addressing sustainability challenges globally. SD has grabbed the piece of attention in national and global context. Since 1992, Pakistan took forth steps to meet the SD goals. Population of interest was all postgraduates enrolled in the public institutes. To gather and report the study findings 600 postgraduate students were randomly selected from the six public universities as a study sample. Self-developed questionnaire consisting of 24 items with facility index (.794) was administered to gather the evidence regarding acknowledgement and implementation of SD. Descriptive (frequency, means and standard deviations) and inferential statistics Independent samples t-Test and One way Analysis of variance were applied to explore the differences among the variable of interests (gender and degree-program). The research findings indicate that postgraduate students possess a considerable awareness of sustainable development, and their practices are positively correlated with sustainable development principles. This suggests a significant relationship between their understanding and their actions. The study posits that, as a developing nation, sustainability is a critical and urgent aspect of Pakistan's future sustainable development trajectory. It is recommended that policymakers and curriculum setters should prioritize sustainability and integrity in their agendas.

KEY WORDS; Acknowledgement, implementation, Survey design, Sustainable development, Postgraduate Students.

INTRODUCTION

Background and Introduction

Research on Sustainable Development (SD) practice and awareness has been gaining momentum, especially with the urgency of addressing sustainability challenges. In a research by Caradonna (2022), Sustainable development has its roots in forestry back in 1713; when von Carlowitz a son of Greek forester tailored his book not only on continuous growth of woods but to use them in sustained manner. He coined the term sustainability called which in Greek "Nachhaltigkeit" (Schmithiisen, 2013)

According to the research by Bergman et al., (2018),

"The idea of sustainable development gained international recognition, culminating in the current global agenda framed by directives such as the Paris Climate Agreement and the UN 2030 Agenda for Sustainable Development".

According to research report (WCED, 1987) Sustainable development is somewhat that satisfies the contemporary necessities without bargaining the capacities of future eras to address their own issues.

According to United Nations (2000), The Millennium Development Goals established (MDGs) served as a foundational element for sustainability and establish a framework aimed at fostering sustainable development. Among these goals, the seventh specifically targets the assurance of environmental sustainability.

The eight MDGs aimed to eradicate extreme poverty and hunger, ensure universal primary education, and promote gender equality while empowering women, decrease child mortality rates, enhance maternal health, combat severe diseases such as HIV/AIDS and malaria, promote environmental sustainability, and foster a global partnership for development (United Nations, 2015).

Challenges in achieving SD

In a study 2012, Clayton and Bass identified that achieving sustainable development in developing countries is impeded by a series of interrelated and urgent challenges, including economic disparity, political instability, extreme poverty, health crises, social marginalization, population growth pressures, urbanization, climate change, nitrogen overloading, degradation of natural resources, loss of biodiversity, contamination issues, and freshwater scarcity.

UN in Pakistan has been striving hard to realize Sustainable Development Goals in Pakistan. The UN's first and foremost assistance is characterized by policy making and providing technical assistance that plays a critical basis in facilitating towards accomplishment of these goals. In 2018, a notable collaboration was formed as the Government of Pakistan and the United Nations in Pakistan officially launched the UN Sustainable Development Framework (UNSDF), commonly known as the Pakistan One United Nations Program III (OP III), which is set to span from 2018 to 2022. The above mentioned agenda served as a strategic planning document for the medium term, delineating specific objectives focused on ten critical outcomes established through extensive consultations with a wide assortment of stakeholders ensuring alignment with Pakistan's developmental priorities. The direction provided

by the OP III for the period of 2018 to 2022 UN agencies are actively involved with local government into mutual activities transversely in diverse subject domains, thereby putting marvelous shares to attain distinguished outputs to the specified frame of reference. Moreover, advancing the endeavor to achieve the Sustainable Development Goals (SDGs) within the nation (Sustainable Development Goals | United Nations in Pakistan, n.d.).

Sustainable development refers to a strategic framework for social, economic, and environmental planning that seeks to align the short-term and long-term requirements of human communities with the essential goal of conserving the natural environment from excessive harm or degradation (Kulik, 2019).

This investigation holds potential advantages for a range of stakeholders. A key prerequisite for achieving sustainable development is the ability to advance without interruptions. The central aim of this research is to assess postgraduate students' acknowledgement concerning sustainable development and to what extent it is aligned with their civic practices. This paper explored the competencies and knowledge that educational institutions impart to aspiring environmentalists, social scientists, and economists. Ultimately, it is incumbent upon these institutions to weave the principles of sustainability into the postgraduate curriculum, thereby promoting ecological balance, social cohesion, and economic sustainability. This study seeks to evaluate that to what extent students enrolled in postgraduate programs possess sustainable development insight and to ascertain whether their implementations make a meaningful contribution to sustainability.

Statement of the Research Problem

Achieving sustainable development has captivated thriving attention worldwide. Sustainability is a crucial and fundamental element for achieving social, economic and environmental effectiveness. The research aims to explore the Postgraduates' acknowledgement and implementations regarding SD (Sustainable development).

Objectives of the study

The present research was sought to:

1. Investigate the postgraduates’ SD acknowledgement.
2. Explore the Postgraduates’ SD implementations.
3. Discover relationship between the postgraduates’ SD acknowledgement and implementations

Research Questions

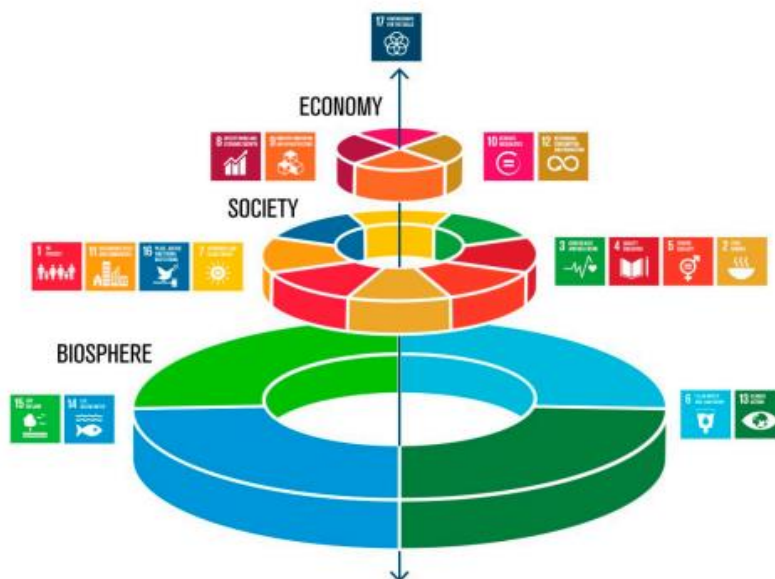
1. Are postgraduate students acknowledged about SD?
2. Is there a notable difference in postgraduates’ sustainable development acknowledgment by gender?
3. Is there a notable difference in postgraduates’ SD implementations by gender?
4. Does degree program influence the postgraduates’ SD acknowledgement?
5. Does degree program influence the postgraduates’ SD implementations?
6. Does any statistical relationship exist between SD acknowledgement and implementations?

Review of related literature

The Sustainable Development Goals (SDGs), commonly known as the Global Goals, were introduced by the United Nations in 2015 as a unified effort to eliminate poverty, protect the environment, and ensure that every individual enjoys peace and prosperity by 2030. Comprising 17 interconnected goals, the SDGs recognize that advancements in one area can impact outcomes in others, highlighting the importance of aligning social, economic, and environmental sustainability in development efforts (Sustainable Development Goals - Bing, 2015).

The Sustainable Development Goals (SDGs) can be summarized as follows:

Eradicate poverty, eliminate hunger, ensure good health and well-being , provide quality education, achieve gender equality, guarantee clean water and sanitation, facilitate affordable and clean energy, promote decent work and economic growth, advance industry, innovation, and infrastructure, mitigate inequalities, foster sustainable cities and communities, encourage responsible consumption and production, take climate action, protect life below water, safeguard life on land ,establish peace, justice, and robust institutions , cultivate partnerships for achieving the goals source (United Nations, 2015).



Source: (Bergman et al., 2018)

SDGs Action in Pakistan

Pakistan has demonstrated its dedication to the 2030 Agenda for Sustainable Development by officially adopting the Sustainable Development Goals (SDGs) as its national development agenda through a unanimous resolution passed by the National Assembly in 2016. Since that time, the nation has achieved significant advancements by integrating these goals into its national policies and strategies, as well as establishing an institutional framework for the implementation of the SDGs. Support units for the SDGs have been created at both federal and provincial levels, collaborating with planning institutions such as the Ministry of Planning Development and Special Initiatives and the Provincial Planning and Development Departments to facilitate the implementation and monitoring of progress related to the SDGs. In 2018, the government formulated and approved a National SDGs Framework that outlines a national vision aimed at prioritizing and localizing the SDGs. Additionally, localized provincial SDG Frameworks are currently being developed. The government's emphasis is on incorporating SDGs into planning processes, ensuring robust monitoring and reporting mechanisms for the SDGs, aligning public financial allocations with the SDGs, exploring alternative financing options, and leveraging technology to expedite progress towards achieving the SDGs (Sustainable Development Goals | United Nations in Pakistan, n.d.)

Cornerstone to Sustainable development

According to Mensah (2019), the three main pillars of sustainable development are economic growth,

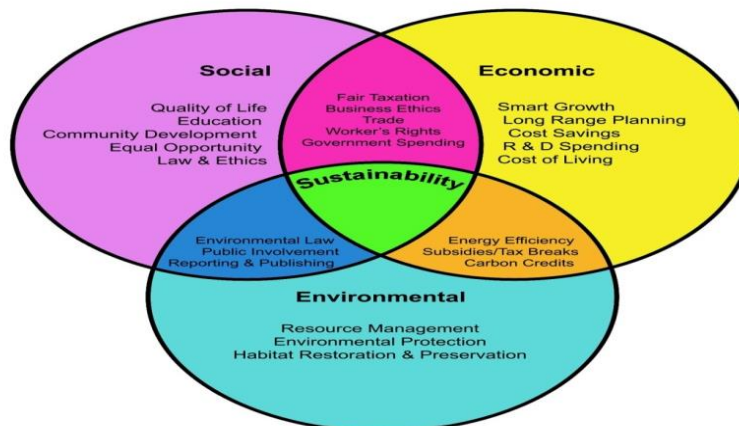
environmental protection and social equality. Based on this, it can be argued that the concept of SD rests, fundamentally, on three conceptual pillars.

In 2013, Karatzoglu described that Sustainable procurement extends beyond merely focusing on environmental, social, and economic dimensions; it aims to establish a balance and harmony among these three elements. This concept encompasses a holistic approach, which is vital for facilitating the transition among the three pillars of sustainable development. Furthermore, universities have played a significant role in advancing efforts toward sustainable development. Manifestations are represented visually through three nested concentric circles or as separate 'pillars', and can also be understood as distinct categories for sustainability goals or indicators without the need for visual representation.

Although these diagrams are appealing due to their straightforwardness, they convey a deeper significance.

Integration among three Pillars of Sustainable Development

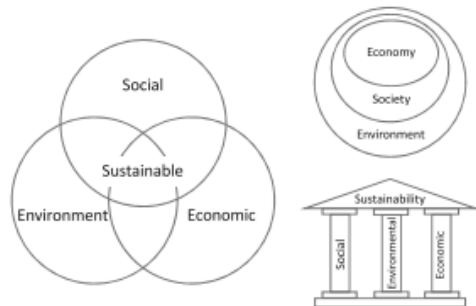
The application of the principles inherent in the three spheres of sustainability to practical scenarios yields beneficial outcomes for all stakeholders involved. The conservation of natural resources is achieved, environmental integrity is upheld, economic stability is preserved, and the overall quality of life for individuals is either enhanced or sustained. A diagram illustrating the interconnections among the three spheres is provided below.



Source: Wanamaker,(2022)

The essence of this statement is that nearly all of our actions and intentions significantly impact the sustainability of humanity.

In a study by Gonzalez et al. (2017), proposed that a significant research portion adjoining sustainability is structured according to the triadic framework; however, there appears to be a lack of thorough consideration regarding how this framework effectively conveys a more holistic understanding of sustainability.



Source: Exploring the Conceptual Foundations of the Three Pillars of Sustainability by (Purvis et al., 2019).

Key Principals to Achieve Sustainable Development:

According to Mensah (2019), as outlined by Harris (2000), the fundamental principles of sustainable development are as follows.

1. The principle of fairness across generations
2. The pursuit of equitable treatment within society
3. The responsibility for sustainable environmental practices
4. The sustainability of economic systems
5. The appreciation of varied cultural expressions

Sustainable Development Awareness/Acknowledgment Strategies

1. Education and training
2. Media campaigns
3. Community engagement
4. Policy advocacy
5. Collaborations and partnerships

Sustainable Development Implementation span includes

1. Renewable energy solutions
2. Sustainable agricultural practices
3. Environmentally sustainable infrastructure
4. Waste minimization and management strategies

5. Sustainable transportation systems
6. Water management for climate resilience
7. Conservation of biodiversity
8. Sustainable consumption trends
9. Green economic initiatives
10. Risk reduction strategies for disasters

According to Ejaz Butt (2024), the implementation model for the Sustainable Development Goals (SDGs) established in Pakistan is guided by three key considerations:

1. A departure from the implementation strategies utilized during the Millennium Development Goals (MDGs) to prevent the recurrence of past errors;
2. Adherence to existing civil service regulations and private sector guidelines, which must be integrated with the new demands introduced by the SDGs; and
3. Alignment with international best practices and the overarching SDG framework to guarantee that efforts to adapt the SDGs to local contexts do not compromise the fundamental intent and essence of the indicators.

Personal Initiatives

1. Minimize energy usage
2. Utilize public transportation or engage in carpooling
3. Participate in recycling and composting efforts
4. Purchase environmentally sustainable products
5. Promote local enterprises
6. Practice water conservation
7. Decrease meat intake
8. Engage in tree planting and support reforestation initiatives
9. Steer clear of single-use plastic items
10. Campaign for legislative reforms

Organizational Strategies

1. Perform assessments of sustainability
2. Adopt energy-conserving measures
3. Encourage sustainable procurement practices
4. Formulate environmental regulations
5. Foster employee involvement and training
6. Allocate resources to renewable energy sources
7. Establish programs for waste minimization

8. Create environmentally friendly products and services
9. Collaborate with organizations focused on sustainability
10. Document and communicate sustainability outcomes

Events and Campaigns celebrated in Pakistan to promote SD

1. World Environment Day (June 5)
2. Earth Day (April 22)
3. Climate Action Week (September)
4. Sustainable Development Goals Summit (annual)
5. COP (Conference of the Parties) meetings (annual)

Research Methodology

The study utilized a descriptive methodology to investigate the postgraduates’ acknowledgement and implementations regarding sustainable development. A cross-sectional survey was implemented as the research design, and Pearson correlation statistical analysis was applied to evaluate the strength of the relationship between variable of interests. This descriptive research involved collecting data from postgraduates at six institutions in Lahore, enabling the derivation of conclusions and the generalization of findings.

Participants

The study's population comprised postgraduate students from six public institutions located in the dist. Lahore. Two stage sampling technique was used. Researcher selected the institutes first and then 600 participants were chosen randomly from the selected institutions.

Instrumentation

To fulfill the study intent researcher employed a questionnaire as research instrument, which consisted of two distinct sections. The first section utilized a five-point Likert scale, ranging from 5, indicating high awareness, to 1, representing low awareness, to assess the level of awareness among

postgraduate students. The second section, labeled "Part B," focused on evaluating practices related to sustainable development using the same range. In addition, demographic data were gathered as part of the study.

Reliability of the Instrument

The instrument's validity and reliability were established through expert evaluation. Instrument’s internal consistency (Acknowledgement and implementation scale) comprises 24 statements, was assessed using Statistical Packages for social sciences yielding facility index $\alpha = 0.794$, indicating strong level of consistency between items.

Data Analysis and interpretation

The analysis and interpretation of data are fundamental components of research activities. The data, gathered through diligent efforts, were subjected to analysis using both descriptive and inferential statistical techniques.

Table 1
Participants’ Demographic Data

Summary demographics	of F	Proportion (%)
sex:		
M(Male)	300	50%
F(Female)	300	50%
Disciplines:		
Pure sciences	204	34%
Social sciences	200	33.3%
Applied Sciences	196	32.7%

The current study involved a total of 600 participants, with 300 (50%) identified as male and 300 (50%) as female. Regarding academic disciplines, 204 participants (34%) were from the Pure Sciences, 200 participants (33.3%) were from the Social Sciences, and 196 participants (32.7%) were from the Applied Sciences.

Table 2

Independent samples t-Test Results to Estimate the Extent of Resilience (Acknowledgement) and Implementations towards Sustainable Development by Gender

	Variable Gender	(N)	Mean	SD	t-Value	df.	p-value
Acknowledge-ment	M	300	41.21	5.044	5.289	598	.000
	F	300	39.11	4.658			
Implementation	M	300	6.45	1.835	-5.857	598	.000
	F	300	5.56	1.915			

Significant level $p < 0.001$

This table illustrates the degree of acknowledgment and the implementations related to sustainable development based on gender, addressing the first research question. In this study, 300 participants, constituting 50%, were male, while the remaining 50% were female.

The t-test analysis revealed a significant difference ($p < .05$) between the mean scores of males (41.21) and females (39.11), with a t-value of 5.289 and

degrees of freedom of 598. The findings indicate that females exhibit a higher level of awareness compared to their male counterparts. To evaluate the participants' implementations concerning sustainable development, an independent sample t-test was conducted. The results indicate a significant gender-based difference ($p < .05$), with a t-value of -5.857, demonstrating that the sustainable practices of females (6.45) are more pronounced than those of males (5.56).

Table 3

ANOVA-To Estimate the Extent of Acknowledgement and Implementations towards Sustainable Development by Discipline

	Source of variance	Sum of Sq.	Mean Sq.	F	df.	Sig
Acknowledgement	Between Groups	464.441	232.220	9.702	2	.000
	Within Groups	14288.877	23.934			
Implementation	Between Groups	190.969	95.485	9.018	2	.000
	Within Groups	6321.429	10.589			

Significant at level $p < 0.001$

One way- Analysis of Variance was applied to determine the impact of degree program on participants' acknowledgement and implementations it was evident from the results that degree programs significantly impact the sustainable development acknowledgement and implementation ($p < .001$). Value for degree of freedom within groups is 597 and between groups are 2.

Table 5

Correlation: relation between concept/awareness and practices of postgraduate's regarding sustainable development

Variable	n	R-Value	Sig
Whole Acknowledgement	600	.768	.000
Whole Implementation			

Significant level $p < 0.001$

Correlation analysis results showed that there exists highly positive significant relationships ($p < .001$) exist between sustainable development acknowledgement and implementations. This implies that the more students acknowledged regarding SD their implementations will be aligned with it.

Conclusion

The findings indicate a notable disparity in awareness levels between genders, with females demonstrating a higher degree of awareness than their male counterparts. Furthermore, the degree program adds substantially in enhancing students' understanding of SD. An assessment of sustainable development practices revealed that female participants contribute more significantly than males to these efforts. Additionally, the degree program has a substantial influence on the practices associated with sustainable development. Ultimately, the study underscores that increased awareness among students regarding sustainable development correlates with a greater likelihood of adopting habits that promote harmony in three areas of sustainability.

Discussion

Sustainable development studies are gaining momentum day by day global as well as in local context. Thus researcher tried to capture the evidence in cotemporary approach by choosing the young and senior citizens as research participants who're primarily responsible for shaping the environmental, social and economic paradigms as that the core of sustainable development revolves around the principles of inter- and intergenerational equity, fundamentally supported by three distinct yet interrelated pillars: the environment, the economy, and society this literary evidence is aligned with multiple researches (Mensah, & Casadevall, 2019);

The current research was an attempt to explore the discrepancies among postgraduates' regarding sustainable development acknowledgement and practices in local context with variable of interests i.e. gender and degree program. Moreover, to find the nature of relationship between participants' acknowledgement and practices

The study identified and contends that females are more acknowledged about SD and contending more with SD this evidence is positively coherent with the SGD1, 2,3& 8. This result is supported by UNESCO argument.

According to UNESCO article Sustainable development begins with education, (2015)

“Educated girls have children later and smaller families overall. They are less likely to die during pregnancy or birth, and their offspring are more likely to survive past the age of five and go on to thrive at school and in life. Women who attended school are better equipped to protect themselves and their children from malnutrition, deadly diseases, trafficking and sexual exploitation”

According to Araneo (2023), HEIs are putting great impact on SD acknowledgement and practices he discovered in his piece of research that the effects of sustainability initiatives implemented by higher education institutions (HEIs) encompass tangible transformations in ecological sustainability, the formulation of policies, and the enhancement of individuals' well-being. This postulate goes in the favors the research finding that HE disciplines categorized as pure social and applied sciences contributing an overall significant impact three dimensions of SD. In 2024, the study by Xu et al, highlights the importance of incorporating sustainability into educational and administrative practices, fostering a culture of sustainability within higher education institutions. The whole sum-up of the research is that at postgraduate level of education students become highly aware regarding Sustainable development and their attitudes beliefs and practices are positively aligned with the awareness this evidence is supported by an international research conducted in UAE by (Al-Naqbi & Alshannag, 2018).The research indicated that students at UAEU demonstrated a significant comprehension of Education for Sustainable Development (ESD), accompanied by notably positive attitudes and moderately positive behaviors towards environmental issues.

Recommendations:

The subsequent recommendations are presented in light of the findings and conclusions drawn from the study.

1. Education for SD should be integrated as a fundamental element in all postgraduate courses.
2. It is essential to organize seminars aimed at deepening students' comprehension of sustainable development.

3. Workshops and training sessions ought to be organized to demonstrate the practical implementation of sustainable development principles.
4. Professional development opportunities should be provided for educators to enable them to effectively integrate both theoretical and practical aspects of sustainability into their teaching.
5. Policymakers should prioritize sustainability and integrity in their agendas.
6. Awareness and practice are intrinsically linked; therefore, efforts should be made to maximize awareness to facilitate its translation into practice.

Bibliography:

- (Brundtland Commission Report, 1987). - Bing. (2016). Bing.
[https://www.bing.com/search?q=\(Brundtland+Commission+Report%2C+1987\).&cvid=b626c43dfc034cf29ade97d2d90d1eab&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIGCAEQABhAMgYIAhAAGEAyBggDEAAYQDIGCAQQABhAMgYIBRAAGEAyBggGEAAYQDIGCacQABhAMgYICBAAGEDSAQc00DBqMG00qAIIsAIB&FORM=ANAB01&PC=U531A/54/2000*](https://www.bing.com/search?q=(Brundtland+Commission+Report%2C+1987).&cvid=b626c43dfc034cf29ade97d2d90d1eab&gs_lcrp=EgZjaHJvbWUyBggAEEUYOTIGCAEQABhAMgYIAhAAGEAyBggDEAAYQDIGCAQQABhAMgYIBRAAGEAyBggGEAAYQDIGCacQABhAMgYICBAAGEDSAQc00DBqMG00qAIIsAIB&FORM=ANAB01&PC=U531A/54/2000*) General Assembly. (2000). <https://documents.un.org/doc/undoc/gen/n00/388/97/pdf/n0038897.pdf>
- Araneo, P. (2023). Exploring education for sustainable development (ESD) course content in higher education; a multiple case study including what students say they like. *Environmental Education Research*, 30(4), 1–28. <https://doi.org/10.1080/13504622.2023.2280438>
- Bass, S., & Dalal-Clayton, B. (2012). *Sustainable Development Strategies*. Routledge. <https://doi.org/10.4324/9781849772761>
- Bergman, Z., Bergman, M., Fernandes, K., Grossrieder, D., & Schneider, L. (2018). The Contribution of UNESCO Chairs toward Achieving the UN Sustainable Development Goals. *Sustainability*, 10(12), 4471. <https://doi.org/10.3390/su10124471>
- Caradonna, J. L. (2022). Introduction. *Sustainability*, 1–21. <https://doi.org/10.1093/oso/9780197625026.03.0001>
- Ejaz Butt, A. (2024, September 11). *SDG Mainstreaming, Localization, and Decentralization in Pakistan*. *SDG Knowledge Hub*; *SDG Knowledge Hub*. <https://sdg.iisd.org/commentary/guest-articles/sdg-mainstreaming-localization-and-decentralization-in-pakistan/>
- Ferguson, T., Roofe, C., Cook, L. D., Bramwell-Lalor, S., & Gentles, H. (2022). Education for Sustainable Development (ESD) Infusion into Curricula: Influences on Students' Understandings of Sustainable Development and ESD. *Uwi.edu*; *Brock Education*. <https://uwispace.sta.uwi.edu/items/1adc15c7-7672-4ed6-a24c-23755cb6a06f/full>
- Ferguson, T., Roofe, C., Cook, L. D., Bramwell-Lalor, S., & Hordatt Gentles, C. (2022). Education for Sustainable Development (ESD) Infusion into Curricula: Influences on Students' Understandings of Sustainable Development and ESD. *Brock Education Journal*, 31(2), 63–84. <https://doi.org/10.26522/brocked.v31i2.915>
- Gonzalez, A., Thompson, P., & Loreau, M. (2017). Spatial ecological networks: planning for sustainability in the long-term. *Current Opinion in Environmental Sustainability*, 29, 187–197. <https://doi.org/10.1016/j.cosust.2018.03.012>
- Guterres to world leaders: Stay committed to UN development goals. (2024, September 24). *UN News*. <https://news.un.org/en/story/2024/09/1154811>
- Harris, J. (2000). *Basic Principles of Sustainable Development*. <https://www.bu.edu/eci/files/2019/06/Sustainable-Development.pdf>
- Keiner, M. (2005). History, definition(s) and models of sustainable development. *History, Definition(S) and Models of Sustainable Development*. <https://doi.org/10.3929/ethz-a-004995678>
- Kulik, R. (2019). Sustainable development | economics. In *Encyclopædia Britannica*. <https://www.britannica.com/topic/sustainable-development>
- Mensah, J. (2019). Sustainable development: Meaning, history, principles, pillars, and Implications for Human action: Literature Review. *Cogent Social Sciences*, 5(1), 1–21. *Tandfonline*.
- Purvis, B., Mao, Y., & Robinson, D. (2019). Three Pillars of sustainability: in Search of Conceptual Origins. *Sustainability Science*, 14(3), 681–695. *springer*. <https://doi.org/10.1007/s11625-018-0627-5>
- Schmithiisen, F. (2013). *Working Papers International Series Three hundred years of applied sustainability in forestry*. <https://www.research-collection.ethz.ch/bitstream/handle/20.500.11850/154087/1/eth-7348-01.pdf>

- sustainable development goals - Bing. (2015). Bing. https://www.bing.com/search?pglt=2083&q=sustainable+development+goals&cvid=fa620386f4ea4ed5894b9d919f8ddfbf&gs_lcrp=EgZjaHJvbWUqBggDEC4YQDIGCAAQRRg7MgYIARBFgDkyBggCEC4YQDIGCAMQLhhAMgYIBBAAGEAyBggFEAAYQDIGCAYQABhAMgYIBxBFGDwyBggIEEUYPNIBCDcyMjdqMGoxqAIIsAIB&FORM=ANNTA1&PC=U531
- Sustainable Development Goals | United Nations in Pakistan. (n.d.). Pakistan.un.org. <https://pakistan.un.org/en/sdgs>
- United Nations. (2000). Millennium summit. United Nations. <https://www.un.org/en/conferences/environment/newyork2000>
- United Nations. (2015). Research Guides: UN Documentation: Development: 2000-2015, Millennium Development Goals. Un.org. <https://research.un.org/en/docs/dev/2000-2015>
- United Nations. (2024). The 17 Sustainable Development Goals. United Nations. <https://sdgs.un.org/goals>
- Wanamaker, C. (2022, October 18). The Environmental, Economic, and Social Components of Sustainability. HubPages. <https://discover.hubpages.com/politics/The-Environmental-Economic-and-Social-Components-of-Sustainability>
- WCED. (1987). Report of the world commission on environment and development: Our common future. United Nations. <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>

