



THE PROBABILITIES OF IMPLEMENTING THE GOALS OF SUSTAINABLE DEVELOPMENT: A GEOGRAPHIC PERSPECTIVE

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ABSTRACT

The Paper examines the viability of incorporating sustainable development concepts into geography Terms. Due to the varying status of geography as a subject in different countries and the preference for some sustainable development goals over others, a review of the literature using keywords reveals that issues are incorporating the concepts of sustainable development. The environmental aspect of the sustainable development goals, which mostly takes the shape of advice on how to behave in the outdoors, particularly dominates school geography.



This is why the Special Issue is devoted to cutting-edge, sustainability-focused geographical research on the subjects addressed by the SDGs mentioned above, which investigates the varied social, environmental, cultural, and economic settings at different spatial scales. Additionally, it encourages articles that discuss the use of geography in the classroom and other educational settings, the role that geographers play in community-based learning, and how to raise community understanding of environmental issues, climate change, and sustainable development. Geographers must elevate their field as the primary means of advancing the social and environmental sciences toward sustainability. Geography is a multidisciplinary field that includes both the social and natural sciences, which naturally makes it possible to investigate sustainability from a cross-disciplinary angle. Geographers have an excellent opportunity to engage in sustainability research. The transdisciplinary problems in sustainability science cannot be resolved with the current understanding of the interaction between humans and the environment and the tools used to research this relationship. To help geography attain sustainability, five study fields are suggested: geographical processes; ecosystem services and human welfare; human-environmental systems; sustainable development; and geo-data and modelling for sustainability.

KEYWORDS: Sustainable Development, Geographical Sustainability, Implementing the Sustainability Goals.

INTRODUCTION

The extensive field of geography examines how human-earth systems are coupled and interact. It offers significant foundational ideas, techniques, models, and data for sustainable development and has inherent subject advantages for advancing sustainable development. By examining the relationship between social science and natural science, geographers have made significant contributions to the field of sustainable development. A new challenge has evolved in the fields of "GEOGRAPHY and SUSTAINABILITY" to characterize internal relations, organize acquired information, and create spheres of impact across disciplines.

Applied aspects of geography and ecology, geoinformatics and ecological cartography, social-economical geography, ecological regional planning, sustainable regional development, global and regional changes of environment and climate, use of natural resources, and natural resource assessment. For mankind, sustainable development is a fundamental idea. The large global change research initiative "Future Earth: Research for Global Sustainability" was introduced at the Rio+20 United Nations Conference on Sustainable Development to provide the knowledge required to enable transitions towards sustainability. According to van der Hel (2016), the Future Earth program's 2025 vision placed additional emphasis on "Enabling and mobilizing capacities to co-produce knowledge across cultural and social differences, geographies and generations." Geographers have made a valuable contribution to the interplay between the natural and social sciences. The physical environment and human society are connected through geography. sustainable development is a fundamental idea. Global Positioning Systems (GPS), Remote Sensing, Geographic Information Systems (GIS), and internet mapping tools such as. Through its Departmental Honors Program, the Department of Geography and Sustainable Development encourages its majors and minors to enhance and broaden their understanding of these subjects. The curriculum is created to provide our pupils the opportunity to investigate a wide range of geography and sustainable development issues and themes that particularly interest them. Students in the department collaborate closely with the professors, gain research skills, and analysis and creative ideation on sustainability on a local and global scale through the synthesis and bridge of natural and human sciences Geographical processes include the interactions and spatiotemporal fluctuations of soil, water, atmosphere, and biosphere; Human-Environmental Systems: Vulnerability, resilience of socio-ecological systems. Geodata and Sustainability Models: Using geodata and models to promote sustainable development.

SUSTAINABLE DEVELOPMENT

An economic growth strategy known as "sustainable development" aims to fulfil current requirements without sacrificing the capacity of future generations to meet their own. It also seeks to create a resilient, sustainable, and inclusive future for both people and the environment. The four pillars, or areas, of sustainable development are environmental, social, economic, and human. To achieve sustainable development, three essential components need to be balanced: environmental preservation, social inclusion, and economic growth. These components are interrelated and essential to people's and society's well-being. To protect ecological balance, preserve our natural resources, and lessen the effects of climate change, we must practice sustainable development. Although there are many definitions of sustainable development, the one that is most often cited is from the Brundtland Report, also known as Our Common Future: "Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Aiming to fulfill human development objectives while preserving natural systems' ability to offer essential natural resources and ecosystem services to humans, sustainable development is an organizational concept The goal of sustainable development is to strike a balance between social progress, environmental preservation, and economic growth. "Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs" is how the Brundtland Report from 1987 described sustainable development.[These days, the idea of sustainable development is centred on the preservation of the environment for coming generations as well as social and economic progress. The strategic policy of a nation (perspective) and several methodologies (systemic, complex, and goal) may be used to categorize the indicators of sustainable development. The level and state of development (which characterizes the procedures, effectiveness, security, autonomy, accountability, and results of public activities); The planning, service, and management viewpoints of landscapes (which characterize the capacity to adapt and predict) are some possible associations for the classification units.

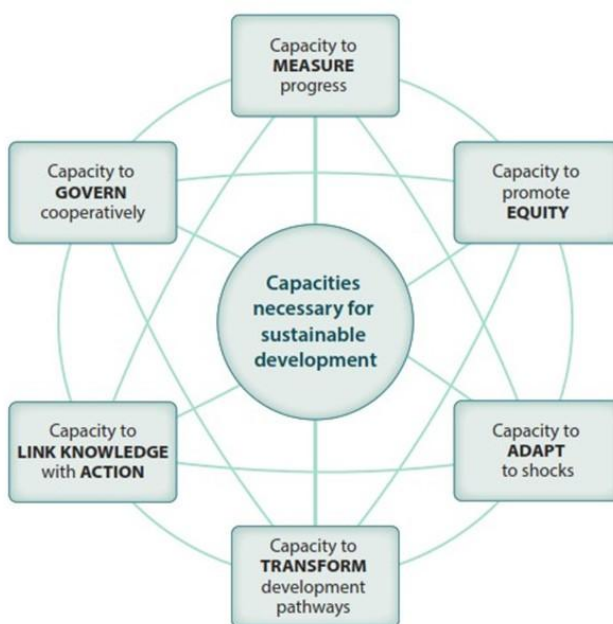
The many elements of the geographical layer—the lithospheric, atmospheric, hydrosphere, biosphere, pedosphere, and landscape—can also be used to analyze the environmental issues. This method works well when the natural components are assessed in light of their potential as

resources. For example, the lithosphere can be evaluated based on the relief shapes, site altitude, and mining development potential.

Sustainable Development Goals



The Sustainable Development Goals (SDGs) are a set of global goals for fair and sustainable health at every level: from planetary biosphere to local community. The aim is to end poverty, protect the planet and ensure that all people enjoy peace and prosperity, now and in the future. The 2030 Agenda for Sustainable Development was endorsed by every nation in the UN in 2015. It lays forth 169 tasks under 17 goals. These lofty and diverse Goals are interconnected. Ensuring healthy lifestyles and promoting well-being for people of all ages is the third goal. However, it is also intersectoral, meaning that advancement in its execution advances other goals, and further action toward other goals advances the achievement of Goal 3. The majority of the goals also include specific health objectives. There are indications for each of them that may be used to gauge progress.



Ability to Promote Sustainable Development The effective pursuit of sustainability requires the following six interconnected capacities: (i) the ability to gauge progress made toward sustainable development; (ii) the ability to advance equality within and across generations; (iii) the ability to adjust to shocks and surprises; and (iv) the ability...

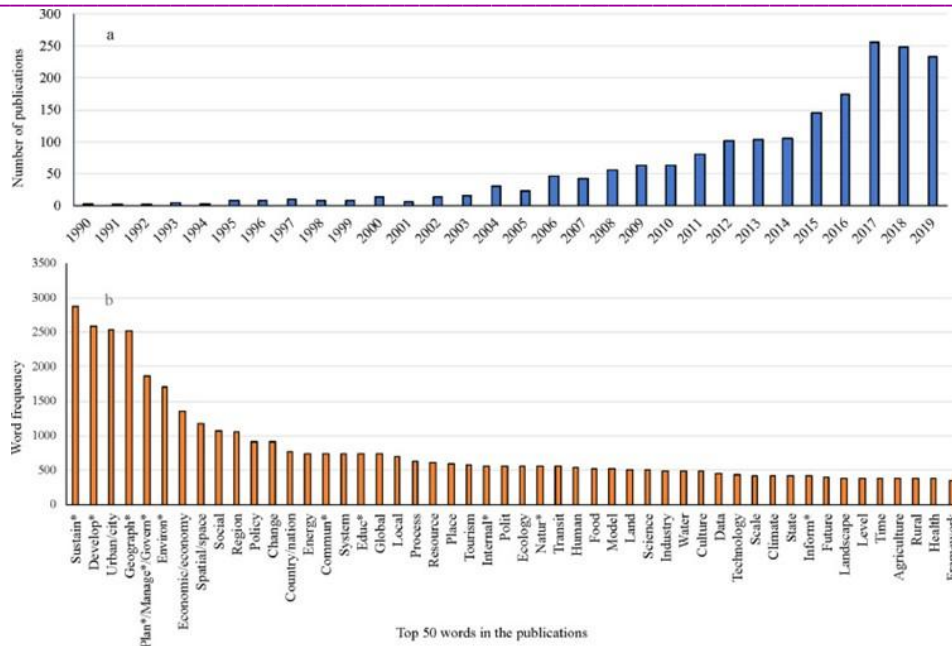
The developed capacities have not been maintained or preserved for several reasons related to elements in the nation's overall action environment or the context of public service. Without taking into account the organizational/institutional environment, capacity development initiatives have frequently concentrated on the development of individual capacities. Policy considerations and the broader context that affects the retention and application of the learned skills were excluded from capacity-building initiatives that were directed toward the latter. Governments have received much of the focus on capacity building, with little to no emphasis placed on the need to build the capacities of other national partners, such as civil society, whose contributions are essential to the success of national development programs.

Sustainable Goals and Geographic Perspective

Combining aspects of the scientific and social sciences, the old and well-known study of geography formulates the interaction between man and the environment. The direct and indirect effects of environmental variables on the evolution of society are often the subject of sufficient investigation. For instance, the population's lifestyle and economic specialisation are determined by the variety of climates found on Earth. The influence of climate change on technological growth has been demonstrated by a recent study. The Sustainable Development Goals in this context demonstrate the intimate connection between social challenges.

As a result, geography instruction in the classroom, along with other courses from the Natural scientific cycle, can provide pupils with a natural scientific understanding of the globe. On the path to sustainable growth, our society faces several issues, many of which are still discussed in newspapers and social media. Table 1 shows you the high potential of the topics covered in the curriculum, but they are not employed in the teaching and learning process. The methodologists are responsible for deciding which approaches should be prioritized and in which direction the troublesome issues should be brought up. To reduce poverty is one of the aims of sustainable development. Over 800 million people worldwide, according to the UN, are estimated to be living below the poverty level. In order to eradicate poverty, sustainable development aims to provide a social safety net, guarantee that almost all men and women have equal access to economic resources and technology, and cut global poverty by 50% by 2030. According to The Poverty and Shared Prosperity 2020, 83–132 million more individuals globally were forced to hunger in 2020 as a result of the coronavirus pandemic, bringing the total to 771–820 million people. The world in which we all live is a very important place that has to be protected. Numerous issues have been plaguing our countries, including but not limited to: extreme poverty, young unemployment, violent extremism, terrorism, natural catastrophes, escalating war, humanitarian crises, and forced population relocation. All of them have put our ecosystem in danger and undone a large portion of the recent advancements in development. As a result, mankind will have to deal with the depletion of natural resources, the negative effects of environmental deterioration, such as desertification, land degradation, famine, drought, shortage of freshwater, and biodiversity loss. The greatest problems of our time are rising sea levels, ocean acidification, global temperature increases, and the effects of climate change, all of which make it more difficult for any nation to achieve sustainable development.

Given the possibility of tight connections between sustainability science and geography, the first question that has to be addressed is: what research areas best exemplify the disciplines that interact most quantitatively? In order to find word frequencies from the titles, keywords, and abstracts of all relevant papers in the ISI Web of Science, a statistical treatment is applied for this study in order to scan essential subjects. "Topic= (geography AND sustainability) or Topic= (geography AND sustainable development)" was the filter rule. The top 50 keywords from the articles from 2010 to 2019 were retrieved, and over 80% of the publications published annually over that time period (Fig. 1).



Geography Needs to be Promoted for Sustainability

This paper's second query is: Why is geography education necessary? Numerous terms from spatial research have also surfaced in sustainability studies, according to the data and Given the intimate connection between geography and sustainability, is it possible for existing geographic patterns to satisfy sustainability requirements? The simple answer at this moment is no. Even if there has been a rise in funding for geographic research recently, why is this advancement not enough to stop the deterioration of the environment, global warming, and growing inequality? Although they haven't developed specific plans to reach these objectives, geographers have contributed to sustainability goals from the discipline's point of view. The fundamental inquiries of sustainability studies.

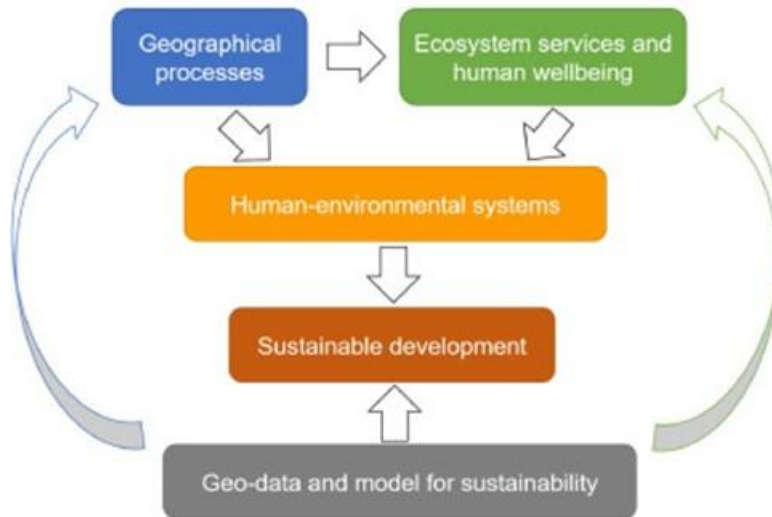


Fig.- Research fields that promote geography for sustainability

Human-Environment System in Sustainability

It is vital to improve the management of important environmental factors in order to stop the environment and natural resources from degrading too quickly. In addition, in order to achieve the sustainable development of the systems, the self-organizing qualities of every subsystem in human-

environmental systems—also known as coupled human and natural systems, social-ecological systems, and human-earth systems in various fields—should be strengthened (Ostrom, 2009). A human-environmental system's coupling relationship, dynamics, and external driving forces are all impacted by disturbances, system connection, and outside driving factors. In human-environmental systems, vulnerability and resilience have emerged as two key theoretical concepts for explaining the intricate interactions, outcomes, and escape routes (Adger, 2006; Gunderson and Holling, 2003). The literature on resilience and vulnerability highlights the necessity. presenting the past 500,000 years of human-environment relations history. After that, the main global and regional environmental issues of the twenty-first century are taught, along with the underlying causes of contemporary environmental degradation that must be addressed and the effects of various economic sectors (agriculture, forestry, urban, rural, industrial, energy, transportation, manufacturing, and service sector). The course also discusses the idea of sustainable development and the efforts being made at the national and international levels (in India) to accomplish it in the domains of technology, policymaking, and human behavior. Here, students will learn about cutting-edge subjects including ecological economics, paying for ecosystem services, sustainable agriculture and food, building sustainable infrastructure and smart cities, international regulations, and national initiatives related to the Sustainable Development Goals (SDGs).

CONCLUSION

The science of geography serves as the foundation for geographical education at all levels in terms of both content and data. The science of geography is also essential to school geography. The capacity of geography to investigate the spatial rules of global development determines the significance of connecting the Sustainable Development Goals with contemporary trends in geographical science. Therefore, the material on sustainable development that is taught in geography classes need to have a scientific foundation. In light of this, it is crucial to evaluate each Sustainable Development Goal's current level of research in relation to contemporary geographic science. It is proven that more research is necessary to fully understand the potential for integrating sustainable development concepts into geography curriculum.

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