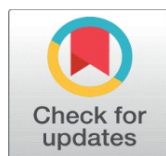
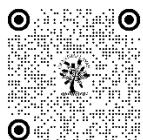


SUSTAINABLE DEVELOPMENT: REQUIREMENTS OF THE FUTURE ERA

Dr. Mukesh Bala 

¹ Associate Professor of Economics, Hindu Girls College, Sonipat



Corresponding Author

Dr. Mukesh Bala,
Mukeshkataria2011@gmail.com

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ABSTRACT

Sustainable development is no longer a mere ideal or a set of abstract goals but has become an essential framework, for addressing the global challenges of the 21st century. As environmental, social, and economic systems are increasingly interconnected, the future of humanity hinges on our ability to achieve, sustainability across multiple dimensions. This paper reviews the evolving concept of sustainable development, its importance for the future era, and the key requirements for fostering it in a world marked by climate change, resource depletion, economic inequality, and technological advancements. This review paper synthesizes insights from current literature, identifies the challenges ahead, and proposes the necessary steps for achieving sustainable development in the future.

Keywords:

1. INTRODUCTION

Sustainable development, as defined by the Brundtland Commission (1987), refers to "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Over, the past few decades, this concept has gained widespread recognition as a critical framework for balancing economic growth, environmental protection, and social equity. However, the future era presents new and unprecedented challenges for sustainable development due to rapid urbanization, technological disruptions, and escalating environmental crises such as climate change, biodiversity loss, and resource depletion (Sachs, 2015). The concept of sustainable development has evolved from a focus on environmental protection to a broader framework that includes economic development and social justice. In the 1990s, the United Nations (UN) defined sustainable development as encompassing three pillars: environmental sustainability, social sustainability, and economic sustainability (WCED, 1987). The adoption of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) in 2015 marked a significant step in creating a universal framework for addressing, global challenges across these three dimensions (United Nations, 2015).

Despite progress in policy frameworks, there is growing concern about the pace of achieving sustainability, especially considering the mounting pressures on natural resources, the increasing wealth gap, and the socio-political instability caused by climate change (Raworth, 2017). In the future, economies must transition to models that prioritize long-term ecological balance and social well-being (Bhandari, 2019).

2. LITERATURE REVIEW

Economic sustainability has been a cornerstone of sustainable development discussions. Early economic models were often criticized for equating development with GDP growth, without accounting for environmental costs and social inequalities (Daly, 1996). In contrast, the concept of green growth emerged in the early 2000s, which advocates for a decoupling of economic growth from environmental degradation (OECD, 2011). Recent studies have emphasized the need for circular economies, which promote resource efficiency, waste reduction, and sustainability in production processes. Geissdoerfer et al. (2017) argue that circular business models—where products are designed for reuse, recycling, and minimal waste—hold significant potential for economic growth without the destructive impact on ecosystems. Meanwhile, the role of green jobs has been highlighted as an important avenue for achieving economic growth while addressing climate change, as seen in the EU's Green Deal and similar initiatives (UNEP, 2014). However, critics like Jackson (2009) have pointed out that economic growth, as traditionally defined, often leads to resource overuse and environmental harm. Innovations such as solar power, wind energy, and battery storage technologies are leading the way in decarbonizing energy systems (IRENA, 2020). Furthermore, artificial intelligence (AI) and big data are being leveraged to optimize resource use, reduce waste, and enhance energy efficiency across sectors (Brynjolfsson & McAfee, 2014). Guzman et al., (2024) examined the evolving role of these disciplines in promoting sustainable practices and highlights the critical challenges and opportunities businesses face in contributing to sustainable development.

According to Godfray et al. (2010), innovations such as genetically modified crops, water-efficient irrigation systems, and data-driven agriculture practices are crucial for addressing global food security challenges. The concept of inclusive development has gained prominence in this context. Sen (1999) argued that true development must focus on expanding human capabilities, ensuring that individuals have the freedom and resources to pursue their well-being. Social enterprises, community-based organizations, and cooperative movements are emerging as key actors in fostering social capital and sustainable practices at the local level (Mulgan, 2007). However, the urgency of the situation has led to increasing calls for more ambitious actions, such as achieving net-zero emissions by 2050 (IPCC, 2021). Studies by researchers like Stern (2007) emphasize that early action on climate change mitigation is not only crucial for environmental reasons but, also economically beneficial. Moreover, the concept of climate justice—which addresses the unequal burden of climate impacts on poorer, more vulnerable populations—has gained significant traction (Roberts & Parks, 2007). Scholars like Butchart et al. (2010) warn that urgent and systemic changes are necessary to reverse current trends.

3. RESEARCH METHODOLOGY

Nature of Research study: The above study is conducted using the descriptive research design. Here the authors attempted to elaborate the concept of sustainable development and examine the existing review of literature on sustainable development.

Methods of data collection: secondary sources of data collection are used in this study. Mainly the data is collected from research articles and internet websites.

4. CONCLUSION

The future era will demand a new paradigm of development, one that is not just economically viable but also socially inclusive and environmentally responsible. Sustainable development, in its truest sense, requires the integration of ecological, social, and economic considerations into every aspect of governance, business, and daily life. To achieve the SDGs and ensure a better future for all, humanity must embrace transformative technologies, rethink economic models, and work together globally to address the challenges ahead. The future era of sustainable development, requires an integrated approach that aligns economic, environmental, and social considerations. While progress has been made, the literature highlights the urgent need for accelerated action, particularly in mitigating climate change, addressing social

inequalities, and fostering technological innovation. Moving forward, a shift towards circular economies, green technologies, inclusive social policies, and effective governance frameworks will be essential for achieving a truly sustainable future.

CONFLICT OF INTERESTS

None.

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