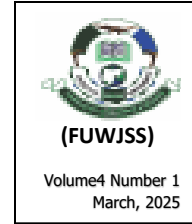


A CRITICAL ASSESSMENT OF ECOLOGICAL SUSTAINABILITY IN THE NEW WORLD ORDER

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Abstract

The challenges of ecological sustainability have grown exponentially in the face of rapid globalization, economic expansion and resource exploitation. This paper synthesizes the interplay between ecological sustainability and the emerging new world order which is characterized by shifting geopolitical power dynamics, technological innovation, and multilateral governance frameworks. The paper was anchored on the theory of Integrated Sustainability Dynamics (ISD). Data for the paper emerged through secondary sources. Characteristically, the paper examines how global cooperation, technological advancements, and socio-political transformations are shaping sustainability efforts. The analysis highlights challenges such as economic inequalities, resource conflicts, and climate injustices, while emphasizing pathways for fostering an equitable and ecologically sound future for all. The paper concludes that priorities should be given to climate justice by allocating resources equitably to vulnerable nations through expanded climate financing and loss-and-damage funds. Consequently, the paper recommends the need to enhance global governance frameworks, international agreements such as Paris Agreement by integrating legally binding enforcement mechanisms.

Keywords: Ecology, new world order, sustainability, conflict, climate change

Introduction

The concept of ecological sustainability has emerged as a defining imperative of the 21st century, as humanity confronts unprecedented environmental challenges such as climate change, biodiversity loss, deforestation, and resource depletion (Galaz & Moberg, 2020). These ecological crises are exacerbated by economic and political systems that prioritize growth and competition, often at the expense of global health. The challenges of ecological sustainability have grown exponentially in the face of rapid globalization, economic expansion, and resource exploitation (Kanie & Biermann, 2020). At the same time the world is undergoing a profound geopolitical transformation, referred to as the new world order,

characterized by the rise of multi-polarity, shifting power dynamics, and reconfigured global relationships. This new order challenges traditional governance systems, economic priorities, and social norms, with direct implications for ecological sustainability (Klein, 2020).

According to Moore (2023) the intersection of ecological sustainability and the evolving new world order highlights a critical tension between environmental imperatives and geopolitical, economic, and social dynamics, the contemporary world faces unprecedented environmental challenges, such as climate change, biodiversity loss, and resource depletion, while simultaneously undergoing shifts in global power structures, economic paradigms, and governance systems. The relationship between ecological sustainability and the new world order is inherently complex, shaped by issues of power, inequality, technological advancement, and environmental justice (Klein, 2020). On one hand, emerging powers and regional blocs are increasingly influencing global environmental policies and investments in sustainable technologies. On the other hand, tensions over climate financing, resource access, and environmental governance highlight the fragmentation of global cooperation (Biermann & Kin, 2023). This dynamic raises critical questions on how nations can balance economic development with ecological limits. What role does justice play in ensuring equitable solutions for marginalized regions disproportionately affected by ecological crises? This synthesis of issues explores the intersection of ecological sustainability and the evolving world order, focusing on key challenges such as global governance, economic paradigms, environmental justice, and technological innovation. By analysing these interconnected dimensions, it becomes evident that addressing ecological sustainability requires a transformative, justice-oriented approach that aligns global cooperation with the urgent need to preserve planetary boundaries (Galas & Moberg, 2020).

Ecological sustainability has become increasingly important in the context of the new world order. The new world order, characterized by globalization, neoliberalism, and the increasing influence of non-state actors, has created new challenges and opportunities for ecological sustainability (United Nations Environmental Programme, 2023). However, the dominant discourse on ecological sustainability has been criticized for being overly focused on economic growth and technological solutions, while neglecting the social and environmental dimensions of sustainability. The world is facing unprecedented environmental challenges, including climate change, deforestation, and water pollution (Steffen, 2023). These challenges threaten the very foundations of human civilization and require immediate attention and action. The concept of ecological sustainability has emerged as a key framework for addressing these challenges and promoting a more sustainable and equitable world for all.

The new world order has facilitated the global exchange of ideas, technologies, and best practices, which can help to promote ecological sustainability. However, it has also created new risks and uncertainties, including the potential for environmental degradation, social injustice, and economic instability (Kanie & Biermann, 2023). In this context, it is essential to critically examine the concept of ecological sustainability, its historical development, and its relationship to the new world order. The study will also identify the key challenges and opportunities for ecological sustainability in the new world order and provide recommendations for promoting a more sustainable and equitable world. The study is motivated by several factors. Firstly, the environment challenges facing the world are becoming increasingly urgent and require immediate attention and action. Secondly, the new world order has created new challenges and opportunities for ecological sustainability, which need to be critically examined. Thirdly, there is a need for a more comprehensive and nuanced understanding of the concept of ecological sustainability and its relationship to the new world order.

Nations are faced with unprecedented environmental challenges, including climate change, deforestation, water pollution, which threatens the very foundations of human civilization. Despite the growing recognition of the need for ecological sustainability, the concept remains poorly understood and inadequately implemented, particularly in the context of the new world order. The new world order, characterized by globalization, neoliberalism, and the increasing influence of non-state actors, has created new challenges and opportunities for ecological sustainability (Sachs, 2020).

However, the dominant discourse on ecological sustainability has been criticized for being overly focused on economic growth and technological solutions, while neglecting the social and environmental dimensions of sustainability. Furthermore, the implementation of ecological sustainability initiatives has been hindered by a range of factors, including the lack of effective governance structures, inadequate financing, and insufficient public awareness and engagement. Therefore, the problem that this study aims to address is how can ecological sustainability be achieved in the context of the new world order, given the complex and interconnected nature of environmental, social, and economic systems?

Theoretical Framework

This paper is anchored on the Theory of Integrated Sustainability Dynamics (ISD). The proponent of the theory is Meadows (1972); the Theory of Integrated Sustainability Dynamics (ISD) proposes that ecological sustainability is not merely an environmental challenge but a dynamic interplay of three primary domains: socio-political systems, technological

innovation, and ecological systems. It asserts that sustainable development is achievable only through a synchronized transformation of these domains, guided by principles of equity, resilience, and adaptability. ISD emphasizes feedback loops, interdependencies, and system-level synergies to address the complexity of achieving sustainability in the context of the New World Order (Meadows & Meadows, 1972).

It integrates insights from ecology, economics, and political science to explain how human and environmental systems interact dynamically within a globalized world. The Theory of Integrated Sustainability Dynamics offers a holistic framework to understand and address the complexities of achieving ecological sustainability in the new world order. By emphasizing interdependencies, adaptability, and equity, ISD provides actionable insights for policymakers, technologists, and environmental advocates striving for a sustainable and just future (Meadows & Meadows, 1972). The theory assumes that human, technological, and ecological systems are deeply interdependent, and disruptions in one domain reverberate through others. The theory argues that sustainable systems must remain flexible and adaptive to changing global conditions, such as climate change, geopolitical shifts, and technological advancements. On equity, the theory asserts that addressing inequalities, whether economic, social, or ecological is central to achieving long-term sustainability (Meadows & Meadows, 1972).

Research Methodology

This study uses a critical discourse analysis approach to examine the dominant discourse on ecological sustainability and the new world order. The study relied on secondary sources of data. Key materials included books, articles, online resources such as organizational websites were used, and databases like JSTOR and Google Scholar facilitated access to peer-reviewed literature related to the subject of investigation. Qualitative analysis of data was used to data generated. The analysis is based on a review of existing literature on ecological sustainability, the new world order, and related topics. The concept of ecological sustainability has emerged as a critical focus in contemporary discourse as the world grapples with environmental degradation, climate change, and the need for equitable development. Simultaneously, the evolving "new world order" denotes shifting global power dynamics, economic systems, and governance system in a post-globalized, multipolar world.

Ecological Sustainability: Ecological sustainability refers to the ability of ecosystems to maintain their essential functions, biodiversity, and productivity while supporting human and non-human life. According to Brundtland (1987), sustainability integrates environmental protection,

economic development, and social equity to meet "the needs of the present without compromising the ability of future generations to meet their own needs."

Similarly, Daly (1996) emphasized "steady-state economics" as a pathway toward achieving ecological balance, advocating for limited consumption and growth. In contrast, ecological modernization theorists like Mol and Spaargaren (2000) propose that technological advancements and institutional innovation can harmonize development and sustainability goals.

Ecological sustainability refers to the capacity of natural and human systems to co-exist harmoniously while maintaining the integrity of Earth's ecosystems. It involves conserving resources, mitigating climate change, and addressing inequities that stem from environmental degradation (International Renewable Energy Agency, 2022).

The New World Order: The term "new world order" is multifaceted, signifying changes in geopolitics, economic systems, and multilateral cooperation. After the Cold War, the dominance of neoliberal globalization characterized the international order. However, the 21st century has witnessed a shift toward multi-polarity, marked by the rise of emerging economies like China and India, global governance challenges, and the fragmentation of international cooperation. Cox (1981) frames the new order as contested terrain shaped by hegemonic powers and alternative movements while Stiglitz (2002) critique the failures of globalization to address environmental and social inequities.

Geopolitical shifts and environmental diplomacy: There is a significant debate in the literature regarding the role of global governance structures like the United Nations, World Trade Organization (WTO), and climate agreements in advancing ecological sustainability. Multilateral Frameworks: Agreements like the Paris Climate Accord (2015) and the UN's Sustainable Development Goals (SDGs) aim to create a global agenda for ecological balance. Sachs (2020) argues that these frameworks represent progress but remain insufficient due to weak enforcement mechanisms and competing national interests.

With the decline of a unipolar global order, regional organizations like the European Union (EU), Association of Southeast Asian Nations (ASEAN), and BRICS are assuming leadership roles in ecological governance. For example, the EU's Green Deal sets ambitious climate goals, signalling a potential model for regional environmental policy leadership (Von der Leyen, 2020). However, developing nations argue that climate governance frameworks often perpetuate structural inequalities, as observed

in critiques of "carbon imperialism" (Bumpus & Liverman, 2008). Global governance mechanisms, such as the Paris Agreement and the United Nations Sustainable Development Goals (SDGs), reflect a collective response to environmental degradation. Yet, fragmentation in multilateral cooperation exemplified by uneven commitments to carbon neutrality remains a significant barrier. Developing nations often bear the brunt of climate crises despite contributing minimally to historical emissions, fuelling debates about climate justice and financial responsibility (Sachs, 2015).

Economic Growth and Ecological Limits: The tension between economic growth and ecological limits is central to the sustainability debate. Scholars like Meadows et al. (1972) in *Limits to Growth* warned that exponential economic and population growth would overwhelm earth's finite resources. More recent literature questions the "green growth" paradigm, which assumes technological innovation can decouple economic development from environmental harm. Similarly, Kallis (2018) advocates for a "degrowth" economy, which prioritizes ecological balance, well-being, and social equity over perpetual growth, this school of thought critiques the unsustainable consumption patterns perpetuated by capitalist economies. Conversely, proponents of ecological modernization argue that innovation in renewable energy, circular economies, and sustainable agriculture can reconcile development and ecological goals. As Klein (2020) demonstrates, transitioning to 100% renewable energy is technically feasible but requires political will and global cooperation. The current economic model prioritizes growth over environmental well-being. The "extractivist" nature of global trade accelerates ecological degradation in regions rich in natural resources but lacking governance frameworks. A sustainable new world order demands the reformation of global economic systems toward circular economies and fair trade (Sachs, 2015).

Environmental Justice and Power Dynamics: Extant literature underscores the disproportionate impact of environmental crises on marginalized communities, particularly in the Global South. Environmental justice scholars such as Klein (2020) argue that ecological sustainability cannot be achieved without addressing systemic inequalities. Issues of land use, resource extraction, and environmental degradation are often tied to colonial histories and global power imbalances.

Similarly, Stiglitz (2002) critiques the new world order for perpetuating economic systems that extract resources and wealth from poorer nations, exacerbating environmental and social injustices calls for reparative justice and climate financing are increasingly central to international negotiations.

Indigenous knowledge systems and eco-centric worldviews are gaining recognition as vital to sustainability. Moore (2023) for instance emphasizes the importance of indigenous sovereignty and environmental stewardship as alternatives to exploitative paradigms. The dominance of Western economies is now counterbalanced by emerging powers like China, India, and Brazil. These nations play increasingly pivotal roles in global resource use and emissions. Initiatives such as the Belt and Road Initiative (BRI), while fostering economic connectivity, also pose ecological challenges through deforestation, mining, and infrastructural expansion. However, they simultaneously provide opportunities for green diplomacy and sustainable investment (IPCC, 2023).

Role of Emerging Technologies: Technological innovation plays a double-edged role in the intersection of ecological sustainability and the new world order. Opportunities: Advances in renewable energy, carbon sequestration, and sustainable agriculture offer hope for mitigating environmental harm (Rockström, Steffen & Noone, 2009). Risks: The literature warns of overreliance on technocratic solutions that fail to address underlying socio-political and economic drivers of environmental degradation. This includes concerns about geoengineering and resource extraction for technologies like electric vehicles, which can perpetuate environmental harm if not regulated. Technological advancements, including renewable energy, artificial intelligence (AI), and carbon capture, are revolutionizing sustainability efforts. Innovations like smart grids, green hydrogen, and precision agriculture are pivotal in reducing ecological footprints (Crutzen, 2006). However, these technologies exacerbate digital divides, where resource-constrained regions risk being left behind in the green transition (United Nations, 2023).

Challenges to achieving ecological sustainability in The New World Order: The pursuit of ecological sustainability in the context of a rapidly evolving geopolitical landscape, technological advancements, and socio-economic transformations is fraught with multifaceted challenges. These challenges are deeply rooted in systemic inequalities, conflicting interests, and the complexities of global governance. Below is a detailed examination of the key obstacles to achieving ecological sustainability in the new world order.

Climate Inequality and Injustice: One of the most pressing challenges is the unequal burden of climate impacts, which disproportionately affect developing nations and marginalized communities. Despite contributing minimally to historical greenhouse gas emissions, these regions often face the most severe consequences, such as rising sea levels, extreme weather

events, and resource scarcities (IPCC, 2023). This inequality manifests in several ways which include loss and damage, vulnerable nations often lack the resources to recover from climate-induced disasters, leading to prolonged economic and social setbacks. Similarly, Developing countries are often pressured to adopt costly green technologies, despite limited financial and technical capacities (World Bank, 2023).

Resource Conflicts and Geopolitical Tensions: The competition for dwindling natural resources such as water, arable land, minerals, and fossil fuels intensifies geopolitical tensions. Shared water resources, such as rivers and aquifers, often become flashpoints for conflict, particularly in regions like South Asia, the Middle East, and Sub-Saharan Africa (Oxfam, 2023). Again, the transition to renewable energy technologies, such as solar panels and electric vehicles, has increased demand for critical minerals like lithium, cobalt, and rare earth elements. The mining of these materials often leads to environmental degradation and disputes over access and ownership (Barlow & Clark, 2017).

Economic Dependencies and Structural Barriers: The global economy's reliance on resource extraction and unsustainable growth models undermines sustainability efforts for instance fuel Dependency, many economies particularly in the Global South depend on fossil fuel exports, creating resistance to transitioning to green alternatives (Klein, 2020). Also, the demand for cheap goods drives unsustainable practices in production hubs, often in developing countries, perpetuating cycles of ecological degradation and socio-economic inequities (African Union, 2022).

Fragmented global governance: Efforts to address ecological sustainability are often hampered by weak and fragmented global governance, many international climate agreements, such as the Paris Agreement; rely on voluntary commitments, leading to inconsistent implementation and enforcement. Similarly, mechanisms like the Green Climate Fund remain underfunded, limiting their ability to support developing nations in transitioning to sustainable practices (World Resources Institute, 2021).

Technology and digital divides: While technological innovation holds promise for ecological sustainability, it also introduces new challenges such as unequal access to technology; many African countries lack the infrastructure and resources to adopt advanced green technologies, exacerbating global inequalities. Again, the production and disposal of renewable energy technologies, such as solar panels and batteries, generate

significant environmental impacts including mining waste and toxic e-waste (Sachs, 2015).

Socio-Cultural and institutional Resistance: Cultural and institutional inertia often slow down the adoption of sustainable practices for instance the emphasis on consumption as a measure of economic success perpetuates unsustainable behaviours. Lack of public awareness is also a factor, insufficient environmental education with misinformation hinder public support for sustainable initiatives (World Bank Group, 2023).

Another challenge facing ecological sustainability in the new world order is the dominance of neoliberal ideology. Neoliberalism emphasises the importance of free markets, deregulation, and privatization, which can lead to the exploitation of natural resources and the degradation of the environment (Harvey, 2005). For example, the privatization of water resources has led to the displacement of local communities and degradation of ecosystems (Shiva, 2002).

The increasing influence of non-state actors is yet another challenge facing ecological sustainability, such as multinational corporations which have significant impact on the environment and local communities but are often not held accountable for their actions (Falk, 1999). For example, the activities of multinational corporations in the extractive industries have led to significant environmental degradation and human rights abuses (Klein, 2007).

Despite these challenges, there are also opportunities for promoting ecological sustainability in the new world order. One of the key opportunities is the increasing recognition of the importance of ecological sustainability by governments, businesses, and civil society organizations. This recognition has led to the development of new policies and practices aimed at promoting ecological sustainability, such as sustainable development and corporate social responsibility (Held, 2004).

Another opportunity for promoting ecological sustainability in the new world order is the increasing influence of social movements and civil society organizations. Social movements and civil society organizations have played a key role in promoting ecological sustainability and holding governments and businesses accountable for their actions (Escobar, 1995). For example, the anti-globalization movement has highlighted the negative impacts of globalization on the environment and local communities, and has promoted alternative models of development that prioritize ecological sustainability and social justice (Brecher, 2000).

In addition, the new world order has also created new opportunities for promoting ecological sustainability through the use of renewable energy sources, such as solar and wind power, has become increasingly cost-

competitive with fossil fuels, and has the potential to significantly reduce greenhouse gas emissions (IPCC, 2023). Similarly, the use of sustainable agriculture practices, such as permaculture and agroforestry, has the potential to improve soil health, biodiversity, and ecosystem services, while also reducing the use of synthetic fertilizers and pesticides (Altieri, 2002).

Climate change and environmental degradation are deeply contested issues, shaped by political, economic, and ideological divisions. Critics argue that stringent environmental policies hinder economic development, while others emphasize that sustainability growth is necessary to prevent irreversible ecological damage (Sachs, 2020). Similarly, multinational corporations advocate for deregulation and market-based solutions, while climate activists and marginalized communities demand stricter policies to curb corporate exploitation (Klein, 2014). Also, certain powerful entities and individuals benefit from environmental harm, often opposing reforms that threaten their economic interests, for example companies like ExxonMobil, Chevron, and Shell have long lobbied against climate policies while funding misinformation campaigns to downplay climate risks (Oreskes & Conway, 2010).

Companies involved in rare earth mineral extraction for electronic and green tech (such as Tesla and Apple) are sometimes implicated in environmentally destructive mining practices and labour exploitation (Zeng, Li, & Singh, 2018). Environmental degradation and climate injustice are sustained by powerful economic and political interest. Without addressing these systemic issues, efforts to combat climate change risk being undermined by those who stand to gain from continued exploitation. A just transition to a sustainable future requires challenging these forces and holding them accountable (Chomsky & Pollin, 2020).

Conclusion and Recommendations

The challenges to achieving ecological sustainability within the new world order are vast and interconnected. They span inequalities in resources distribution, geopolitical conflicts, systemic economic dependencies, and institutional inertia. Addressing these obstacles requires a coordinated global effort that integrates technology, governance, and socio-economic transformation. By fostering equity, innovation, and multilateral cooperation, the global community can overcome these barriers and pave the way for a sustainable and just future.

Based on the analysis, the following recommendations are made. There is need to enhance global governance frameworks, international agreements such as Paris Agreement by integrating legally binding enforcement mechanisms. Priorities should be given to climate justice by allocating resources equitably to vulnerable nations through expanded climate

financing and loss-and-damage funds. There should be global technology sharing platforms to reduce barriers for developing countries to access sustainable technologies. There should be an increase public awareness and behavioural change, global campaigns and educational initiatives to increase public understanding of sustainability challenges.

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