

Moving the Needle on Sustainability: A Viewpoint from Within and Without

Teck Choon Teo 

School of Business, TMC Institute, Tashkent, Uzbekistan

Email: teo.john@tmc.i.uz

How to cite this paper: Teo, T. C. (2023). Moving the Needle on Sustainability: A Viewpoint from Within and Without. *Journal of Human Resource and Sustainability Studies*, 11, 156-172.

<https://doi.org/10.4236/jhrss.2023.111011>

Received: February 15, 2023

Accepted: March 18, 2023

Published: March 21, 2023

Copyright © 2023 by author(s) and Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

This study delineates between sustainable development, an established idea, and sustainability management, an emerging discipline. Theoretical and practical sustainable development is said to call for a sustainability management viewpoint that emphasizes safeguarding both man-made and natural assets. Management of sustainability comprises all of the actions and steps that must be taken to realize the goal of sustainable development. Last but not least, sustainability management is essential for improving environmental and corporate governance mechanisms that work to ensure that all people, both now and in the future, have access to the world's man-made and natural assets. The study also highlights the importance of developing a sustainability management strategy to guide human actions across the political, economic, social, technological, and legal domains toward long-term sustainability.

Keywords

Sustainability Development, Sustainability Management, Debilitated Sustainability, Robust Sustainability, Man-Made Assets, Natural Assets

1. Introduction

Despite their similarities, sustainable development (SD) and sustainability management (SM) differ. For the reasons mentioned in the Brundtland Report, sustainable development is equivalent to generational and intergenerational equity (Brundtland, 1987; Kates et al., 2005). Even though the term “sustainable development” (SD) can be employed in a variety of contexts (Jabareen, 2008; Ayres et al., 2001), SD refers to the deliberate effort to assure subsequent generations' financial, ecological, and social well-being. To clarify the widening variety of collaborators committed to enhancing SD and their relationships, SM can be de-

scribed as an interdisciplinary, cross-practice, and application field. Implementing the adaptive governance mechanisms required for SD requires an SM strategy that prioritizes maintaining both manufactured (or man-made) and natural assets, incorporating both robust and debilitated sustainability. In addition, it is crucial to emphasize the need to broaden our understanding of SM to match unsustainable human actions through the lens of SM. Together with SD, this development goes beyond the realm of governance.

Defining SM in its broadest sense is the first step in the process. The analysis starts with a foundational understanding of humanity's connection to the natural environment and the accompanying multidimensional efforts to safeguard communal resource infrastructures (Starik & Kanashiro, 2013; Seyfang, 2009). The cross-disciplinary and interdisciplinary elements of SM theory back a diverse and multi-stakeholder strategy for advancing SD. To demonstrate the field's multicentric approach to meeting stakeholder needs, we may investigate SM's propensity for offering SD responses for stakeholders via personal, institutional, and systemic means (Kates et al., 2005). Finally, given the appreciation of how SM is supposed to work in practice, it necessitates unique and specific strategies to SD (Van der Byl & Slawinski, 2015).

The second step is to establish SM's foundations within SD. Using a continuum between "debilitated sustainability" (DS) and "robust sustainability", the SM lens contends that SD challenges can be conceptualized more clearly (RS). This argument presupposes a two-pronged analysis of contrasting perspectives on the relative worth of man-made and natural assets. Initially, it is to demonstrate the possibilities and confines of DS in terms of supporting SD. The latter is to deliberate the dangers RS poses to man-made assets and how to balance it with the necessity to safeguard natural assets. By comparing the two opposites of DS and RS, an SM perspective argue that it recognizes the necessity for all generations to have fair access to SD's man-made and natural assets and that compartmentalized strategies, as shown by the DS/RS divide, are unable to do so. An SM lens can help find ways to integrate the political, economic, social, technological, environmental, and legal (PESTEL) elements of human actions across a continuum of sustainability, making both natural and man-made assets safer and more in tune alongside one another.

Now that we have a working definition and theoretical understanding of SM, we can turn our attention to the fundamental issues of SM discourse: ecological and corporate management.

- 1) The SM literature stresses the need for more research and implementation of management systems that can find an alignment among social, economic, and environmental concerns (Folke et al., 2005, 2011; Dietz et al., 2017; Costanza et al., 2000; Westley et al., 2011).

- 2) It is evident from the SM literature that there is a gulf between ecological academics, who have demonstrated why human behavior adds to the deterioration of humanity's processes (Hsiang & Kopp, 2018; Vörösmarty et al., 2010; Steffen

et al., 2018), and collaborators, who have predominantly accepted a “business as usual” stance.

To better ensure the long-term viability of natural and man-made assets, it is helpful to view them through an SM perspective that highlights the shortcomings of governance structures based on stringent moral codes and ideologies.

When SM is used to look at structures of environmental governance that are based on technocentrism, the limits of a technocentric strategy to protecting natural assets become clear. Technocentrism hinders the transfer of natural assets from one generation to the following. In contrast, the idea of *degrowth* reveals that ecocentrism-based environmental governance structures cannot preserve man-made assets from the SM perspective. In the end, neither approach to ecological regulation recognizes the interconnectedness of man-made and natural assets. Thus, an SM viewpoint divulges the possibilities of increasing research on multiple environmental governance models.

Integrating an SM perspective into shareholder-based corporate governance structures demonstrates that corporate governance systems’ utility for the long-term protection of man-made and natural assets is diminished. Instead, they need to incorporate socio-economic and environmental issues into business activities. In contrast, an SM perspective applied to stakeholder theory-based corporate governance systems can show how the private sector can help protect both man-made and natural assets. The private sector can aid continuous operations and the preservation of both natural and man-made assets through life cycle assessments, ecological sustainability systems, and the development of sustainable value. In addition, worries concerning the effectiveness of CSR initiatives, greenwashing, and related campaigns show that corporate governance frameworks may not guarantee harmony involving business economic activities and the protection of man-made and natural assets. In this instance, an SM perspective indicates the need for continuing research on corporate management systems that function more effectively throughout a debilitated to robust sustainability continuum.

In summary, ecological and corporate management handled separately have flaws that make it difficult to protect both natural and man-made assets. It highlights the importance of a holistic SM lens in promoting research on responsive management and policies that better safeguard natural and man-made assets for present and subsequent generations.

2. Concept of Sustainable Management

SM helps people, institutions, and systems handle environmental and social issues (Starik & Kanashiro, 2013) and provides a venue for more profound economic and social changes (Seyfang, 2009). SM is an ever-evolving field of study and practices rooted in the convergence (or connections among) a growing sector of interested parties committed to mitigating sustainability responsibility and sustainable developmental problems, with its origins in the Brundtland Report’s

fundamental principles and values of SD (Kates et al., 2005). Hence, “many inconsistencies and ambiguities” permeate SM (Van der Byl & Slawinski, 2015: p. 73). First, we will explore humanity’s place in nature and how people protect our planet’s resources.

Divergent views of humanity’s place in nature drive collective resource system protection strategies. One view is that society needs heavy-handed government meddling and punitive measures to prevent resource hoarding. Submitting to a sovereign government’s continuous resource infrastructure protection policies could also ensure environmental oversight. People’s destructive tendencies require discipline to prevent collaborative resource systems from collapsing. Olson laments that compact communities can only defend mutual interests by coercing people to put the community’s demands before their own (Olson, 1965). Hardin elaborates that humanity’s institutions would collapse due to people’s ravenous pursuit of material gain, their unconstrained liberty to pursue happiness, and the lack of effective coercive methods to limit humanity’s negative impact on the earth (Hardin, 1968). Olson and Hardin say human nature makes securing shared infrastructure with valued resources hard. There are additional ways to capitalize on people’s innate environmental stewardship.

Alternative view holds that people can establish norms within their communities to regulate the use of collective resources. From an Ostromian point of view, community-based rulemaking is preferable to externally enforced rulemaking (Ostrom, 2015; Herzberg, 2020). Without the necessity for Hobbes’s Leviathan, this view argues, there are a variety of governance structures that can effectively safeguard collective resource systems through the participation of local community institutions, the state, and scientific organizations (Dietz et al., 2017). From this vantage point, standard environmental protection methods are viewed with suspicion. Because “neither the country nor the market is universally successful in encouraging people to sustain long-term, effective utilization resource systems,” Ostrom concludes that individuals are left to fend for themselves (Ostrom, 2015: p. 1). Given that needs and morality vary between and within communities, a regional and decentralized approach to environmental management is consistent with Rittel and Webber’s belief that there is no single objective plan to assist the community (Rittel & Webber, 1973).

Several scholars, including Rittel & Webber, Dietz et al., Herzberg, and Ostrom have highlighted the importance of capitalizing on humanity’s adaptable forms of community-based governance. In contrast, Olson, Hardin, and Hobbes urge to preserve collective resource systems by limiting the excesses of human nature. SM’s interdisciplinary and multi-stakeholder traits are more accurately reflected by the Ostromian environmental stewardship approach, which is based on a complex, decentralized system of governance structures.

Multi-Stakeholder and Multidisciplinary

As a method of environmental governance, SM involves several different parties

(multi-stakeholders). [United Nations Office for Sustainable Development \(2020\)](#) calls multi-stakeholder partnerships a “strong vehicle to achieve change” (p. 77) because they facilitate the pooling and distribution of expertise and funds to achieve Sustainable Development Goals. Stakeholders (individuals and groups) in SM come from a wide range of academic fields and government and private sector entities at the municipal, regional, and global scale. Instead of relying on a centralized authoritarian figure or organization, SM promotes environmental stewardship through a decentralized network of various interested parties.

Since SM aims to solve environmental problems that cut across many disciplines, it can be described as interdisciplinary (e.g., ecosphere, commerce, government, and administration). The Anthropocene, a new epoch in earth’s past defined by humanity’s apparent influence on planetary systems, including the climate, is one of the significant concerns of SM ([Steffen et al., 2018](#)). In order to properly evaluate the Anthropocene, SM necessitates a multidisciplinary strategy for understanding the complexity of the environment via mathematics, science, and physics and for analyzing the inputs, activities, and implications of environmental issues ([Burroughs, 2001](#)).

When creating a sustainable future, it is crucial to have a strategy that may involve various disciplines and stakeholders. However, the 1987 Brundtland Report provides a helpful working definition of “sustainable development” as development that fulfills the requirements of today without jeopardizing the capacity of subsequent generations to gratify their own requirements ([Ayres et al., 2001](#); [Brundtland, 1987](#)). The SDGs are built on a foundation of intergenerational fairness. The SDGs were established in 2015 and detail the measures humanity must take to end poverty, safeguard the environment, and boost economic growth by 2030 ([United Nations, n.d.](#)). Nilsson et al. note that the 17 SDGs are intertwined and will be more effective if pursued as a group than separately ([Nilsson et al., 2016: p. 320](#)). Further exploring those connections, Stafford-Smith et al. emphasize interdependencies between sectors, social actors, and nations (including nations with diverse wealth standards) to argue that a systems perspective is necessary to facilitate SDG execution ([Stafford-Smith et al., 2017](#)). Moreover, Gibson exemplifies these connections by emphasizing that, just as addressing poverty takes more than an economic analysis, so too makes environmental oversight demand more than biophysical ([Gibson, 2009: p. 261](#)). Therefore, the SDGs’ success or failure depends on the integration of several domains and collaborators (e.g., community, corporate, individual, governmental, non-governmental organizations) to solve a wide range of interrelated problems ([Chan et al., 2019](#); [Burch et al., 2014](#)).

Although SM is in line with global programs like the United Nations Sustainable Development Goals, it is not limited to those goals. Since many stakeholders and academic fields constantly influence SM, the domain will expand as new threats to shared resource systems are identified and mitigated. As knowledge about environmental management and sustainable development grows, so will

the fields and actors involved in SM. However, as mentioned earlier, the tenets of SM will continue to be central to the practice. These include the encouragement of decentralized forms of governance, as well as the use of interdisciplinary and stakeholder-based strategies to promote sustainable development and ecological sustainability.

3. The Role of Sustainability in Management

It is essential to build a discerning SM worldview that places equal value on both man-made and natural assets. Returning to the SM lens, SD concerns can be explored along a continuum ranging from debilitated sustainability (DS) to robust sustainability (RS). As a result, an outline of DS and RS is necessary to demonstrate the conceptual distinctions between these two SD solutions, resulting in an awareness of the ability and limitations of DS and RS to create intergenerational parity. To summarize, an SM lens is proposed to investigate whether human activity can improve SD by safeguarding both man-made and natural assets.

3.1. Man-Made and Natural Assets

Depending on the context, the phrase “natural asset” can refer to a limited supply of raw materials required for the industry. It can also apply to a broader range of assets and ecosystems critical to human survival (Dietz & Neumayer, 2007). A man-made asset can be regarded as the goods, services, and monetary gains produced through raw-materials-reliant manufacturing processes. Unlike RS, DS holds that man-made assets cannot replace natural assets. DS holds that if there is a tangible advantage to future generations, man-made assets can be used as a substitute for natural assets. On the other hand, RS thinks that natural resources should be made available to subsequent generations and current economic models cannot function without ongoing environmental plunder (Dietz & Neumayer, 2007).

3.2. Debilitated Sustainability

There are benefits and drawbacks to using DS in the defense of man-made assets. For future generations, man-made assets can serve as a suitable substitute for natural wealth, as Myanmar has demonstrated. In 2010, Myanmar’s natural forest covered 40.1 million acres. An estimated 159 million metric tons of carbon dioxide were released due to the destruction of forests in 2021, which amounted to a loss of 292 hectares (GFW, n.d.). Due to widespread deforestation in the early 21st century, the Southeast Asian country’s economy boomed. However, the environmental benefits of these gains were outweighed by the costs to human health and the economy. The events in Myanmar demonstrate the peril of DS tactics. Much of Myanmar’s wealth came from deforestation, but the country’s ecological diversity was wiped out during a period of economic turmoil. While DS was implemented in Myanmar, present citizens will not have the same opportunities to take advantage of the country’s abundant natural and man-made

resources as their ancestors.

Notwithstanding the dismal conclusion in Myanmar, DS can still help to conserve natural capital. For example, Norway's oil and gas business provides enough revenue to maintain the country's substantial pension system (Richardson, 2011). The Norway model demonstrates how natural capital can be utilized in place of created capital, potentially resulting in considerable financial rewards for future generations. Similarly, carbon markets may pay cash to increase social welfare while giving financial incentives to minimize carbon emissions (Spaargaren & Mol, 2013). To be explicit, carbon exchanges are not intended to eliminate carbon emissions; instead, they are intended to lower emissions by discouraging their usage and financially compensating firms and industries that rely substantially on carbon-intensive operations (Wang et al., 2017). To summarize, DS is not a cure for our planet's environmental problems. However, by creating man-made wealth, it can help future generations compensate for the loss of ecological assets.

3.3. Robust Sustainability

To safeguard man-made assets, it is essential to comprehend the practicability and architecture of RS systems. Moderate improvements would lessen the wasteful utilization of limited ecological resources in favor of man-made ones, which could make RS in its extreme variants unsustainable for contemporary society (Pelenc & Ballet, 2015; Gray, 2010). The continuation of economic growth depends on protecting essential natural assets, specifically healthy ecosystems (Pelenc & Ballet, 2015). The policy decisions to prevent the building of the Keystone XL pipeline in recent years illustrate RS, as the environmental hazards are deemed irreconcilable with the United States' national interests (Monga, 2021). Despite these RS frameworks, a practical approach to managing the complexities and unknowns of RS transitions has yet to be developed. However, the goal of RS, which is to safeguard natural capital, can be accommodated by adaptable institutional arrangements. Calls to encourage hybrid and multidimensional approaches to SD align with acknowledging the significance of man-made and natural assets (Gladwin et al., 1995). Integrating and optimizing DS and RS principles across diverse stakeholders, economic sectors, and systems is the function of SM in facilitating sustainable transitions. To achieve this goal, an SM lens should look for ways to improve sustainability through coordinated action.

3.4. Utilizing a Framework for Sustainability Management

Human actions, such as ecological or corporate institutional arrangements, are evaluated through the lens of sustainability management to determine if they contribute to the long-term sustainability of both man-made and natural resources. The usefulness of SM as a research topic and practice resides in self-reflection and application.

Figure 1 shows how an SM lens can be used to determine if specific human actions (such as acts and behaviors via policies, or governance) adhere to SD (i.e.,

preserving man-made and natural assets for future generations). Several parameters are taken into account when determining DS-RS continuum alignment. First, to determine whether or not an activity promotes SD, SM (as a professional field) should consider the influence and motive of human action across political, economic, social, technological, environmental, and legal (PESTEL) dimensions. For each endeavor reviewed through the SM lens, a dichotomous question is presented to see whether it falls within the DS-RS continuum by maintaining harmony between natural and man-made resources. When an activity (action) is shown to be unsustainable, the individual interactions of PESTEL elements are examined to find significant areas of concern. Finally, when viewed through an SM lens, human actions can be evaluated for its impact on future generations, and collaborators (actors) can create opportunities for the practical implementation of SM to improve non-sustainable development approaches.

The next part examines environmental and corporate governance systems through an SM lens to see if they strike a good balance between ensuring the long-term sustainability of both environments and businesses.

4. Understanding Current Governance Structures

The capacity of actors (such as governments and organizations) to set and administer rules is called “governance,” and it is an essential topic within the field of SM (Fukuyama, 2013; Burch et al., 2014). The purpose here is to focus on two sub-disciplines of governance—environmental and corporate—to see how they are distinct and may be enhanced. When viewed via an SM lens, environmental and corporate governance solutions become siloed, preventing a holistic picture of SD that may guarantee subsequent generations’ access to natural and man-made resources.

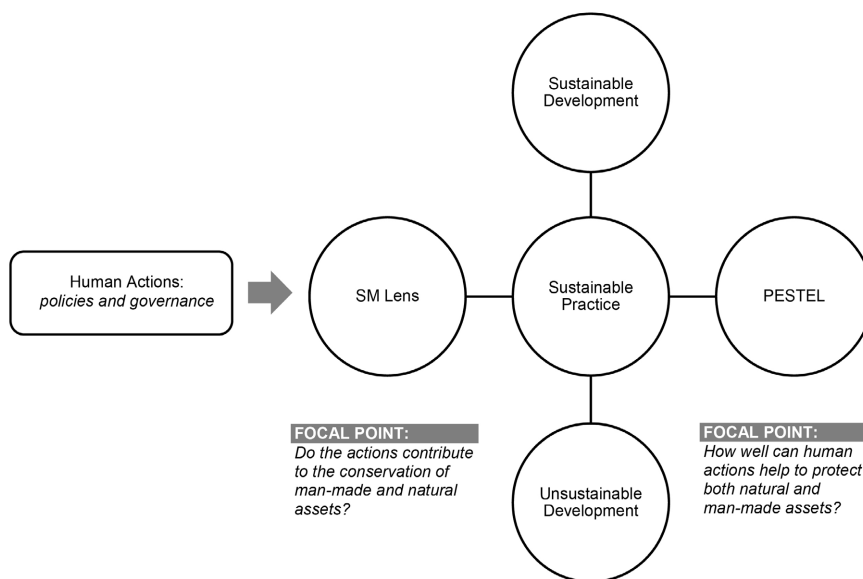


Figure 1. Tracing sustainable management implementation.

4.1. The Classificatory Power of Environmental Governance: Technocentrism and Ecocentrism

The term “environmental governance” refers to implementing laws and regulations that promote environmental and social sustainability (Bennett & Satterfield, 2018). It is possible to create ecological strategy from either a technocentric or an ecocentric approach.

4.2. Technocentrism

Technocentric environmental governance is based on neoclassical economic theory and emphasizes the conservation of created capital through a technical strategy for sustainable development (Gladwin et al., 1995; Illge & Schwarze, 2006; Emetumah, 2017). An optimistic outlook on technology’s capacity to restore the harm humans have done to the environment is at the heart of the technocentric worldview (Costanza, 1989). When it comes to preventing environmental problems, technocentrism cannot support the necessary social, ethical, or behavioral shifts (Gladwin et al., 1995; Chertow, 2000). Two problems with the technocentric strategy for environmental regulation are highlighted through an SM perspective centered on the conservation of man-made and natural assets: the discounting phenomenon and rebounding.

The adoption of electric vehicles (EVs) provides a good case study of the rebounding effect. Compared to conventional vehicles, the operating costs of electric vehicles encourage their owners to take advantage of the convenience of private transportation (Ivanova et al., 2016). There are worries regarding the overall maintenance cost of EVs compared to conventional fuel vehicles, and the greater use of EVs counteracts the efficiency gains (Hawkins et al., 2013). Because of the rebounding effect, technological efforts to safeguard ecological integrity are constrained, and it has been observed that gains in resource efficiency are not always met with equivalent gains in productivity (Hertwich, 2005). However, since this is the case, technological progress may not guarantee any positive effects on the environment.

By depreciating man-made and natural assets, the current generation creates intrinsic intergenerational conflict. A higher discount rate favors immediate expenses over future benefits, making policy choices difficult; using a zero-discount rate to ensure that investments benefit present and future generations has downsides. In order to fund future generations at a zero-discount rate, sacrifices must be made now (Pearce et al., 2003). In sum, current generations benefit from high discount rates, but those with a discount rate of zero leave future generations behind irrevocably. Since discounting allows society to value man-made and natural assets for coming generations without considering their preferences, it breaches intergenerational equality (Pearce et al., 2003).

4.3. Ecocentrism

Ecocentric environmental governance is founded on ecological and economic

theory and encourages the transformation of economic, political, and social institutions to address ecological issues (Emetumah, 2017; Illge & Schwarze, 2006; Gladwin et al., 1995; Costanza, 1989). Regarding environmental policy, ecocentric governance structures prioritize long-term resource security by protecting the planet's natural capital (Illge & Schwarze, 2006; Gladwin et al., 1995). *Degrowth* is a movement that espouses this perspective. *Degrowth* protects natural capital but destroys man-made. *Degrowth*, which limits natural asset replacement, should be promoted if economic growth degrades the environment. Natural resource-based industrialization has boosted global economic growth (Smil, 2017; Schandl et al., 2016). GDP and income per capita are the critical indicators of economic expansion (Hammer & Pivo, 2017). A flourishing economy does not automatically enhance living and social prosperity. Global economic systems that rely on continued economic development through the exploitation of finite resources endanger life-sustaining natural systems (Steffen et al., 2015; Hsiang & Kopp, 2018). *Degrowth* advocates say consumption and output must be reduced to safeguard planet's eco-systems and people well-being (Gibbs & O'Neill, 2017). In sum, *degrowth*-mandated environmental governance regimes would improve natural capital for future generations, but they might cost governments, organizations, and people a lot. SM shows that *degrowth*-based environmental governance systems cannot secure the long-term survival of man-made assets.

4.4. Corporate Governance

The term "corporate governance" refers to the practice of establishing and adhering to standards and guidelines for the interaction between businesses and their various constituencies (including their workers, investors, regulators, and the general public) (Monks & Minow, 2011). Different perspectives on the public good provided by the private sector are at odds with one another in the theories of shareholder theory and stakeholder theory.

4.5. Shareholder Theory

With the help of shareholder theory, today's generations can gain access to man-made created assets. According to the shareholder hypothesis, firms' sole responsibility is to maximize profits. Further to Friedman's reasoning, all a company needs to do to get its goods to customers is to engage in transactional relationships with people like its workers, investors, and vendors (Donaldson & Preston, 1995). Although shareholder theory-based corporate governance systems provide indefinite creation of goods and services (unless natural assets are depleted), excessive focus on profit maximization might reduce the amount of man-made and natural assets available to succeeding generations.

4.6. Stakeholder Theory

The stakeholder theory advocates for forming universal interests between firms and society to protect ecological integrity while maintaining existing economic structures. For example, suppose a business follows the stakeholder model and

succeeds (in line with stakeholder theory). In that case, it must engage in more profound, more extensive, and diverse forms of interaction with a broader range of stakeholders (such as authorities, organizations, and the community) (Donaldson & Preston, 1995). Shared value creation (SVC) provides monetary incentives for businesses and social and environmental benefits for the general public all at once. Accordingly, businesses can safeguard (and in some cases improve) their financial performance by implementing stakeholder theory-based corporate governance systems while also ensuring the long-term viability of their natural and man-made assets. Nevertheless, there are doubts about corporate sustainability activities' effectiveness.

Several authors (Bansal & Song, 2017; Dahlsrud, 2008; Porter & Kramer, 2006) have contributed to the multifaceted and ever-evolving concept of corporate social responsibility. To put it simply, CSR refers to a company's attempts to address social, economic, and/or environmental issues in a way that is separate from but not unrelated to the company's financial interests (Billetteau & Wilson, 2021). Companies are urged to take action to conserve their manufactured and natural capital by CSR activities under stakeholder-theory-based corporate governance systems, despite such programs usually providing only minimal value. CSR projects often lack depth and fail to provide meaningful, long-term results (Porter & Kramer, 2011). Research has demonstrated that most CSR initiatives are little more than a tax dodge for the companies that run them (Sikka, 2010). Sadly, CSR is frequently employed to disguise the actual negative impacts of economic activity.

Stakeholder theory-based corporate governance solutions have avoided greenwashing and lobbying and brought private sector operations into harmony with natural assets protection. "Greenwashing" is using communication to hide environmental irresponsibility (Delmas & Burbano, 2011). Greenwashing often makes use of eco-labels. No significant changes in operations or environmental repercussions like deforestation were detected in a case study using intermediary eco-labels in Indonesia and Brazil's forestry industries (van der Ven et al., 2018). The tendency of corporations to eschew neutral environmental certifications from third parties in favor of their own eco-brands as promotional tools instead as SD strategy has compounded the problem of eco-ineffective labeling. Corporations deploy lobbyists to denigrate environmental experts and policies (Oreskes & Conway, 2015). If not scrutinized by corporations, stakeholder corporate governance systems may help sustainability. However, stakeholder theory-based corporate governance systems fail to relate company operations to preserving man-made and natural assets. Hence more study is needed to connect private sector interests with SD better.

5. Discussion

Taking an SM lens to corporate and environmental governance systems demonstrates that the existing fragmented approaches need to provide adequate sup-

port for SD. From an SM stance, it is clear that there is a need for new forms of adaptive governance to help preserve natural and man-made assets. The potential for SM implementation in practice is likewise revealed through an SM lens. To be effective, SM requires that all facets of human activity (political, economic, social, technological, environmental, and legal) be in sync with SD. Since no one stakeholder or set of skills can adequately assess these challenges, nor can they hope to address them effectively, SM must be an interdisciplinary and multistakeholder discipline of research and practice.

Applying an SM lens to environmental governance revealed the inadequacy of both technocentrism and ecocentrism in protecting both natural and man-made assets. With the help of technocentrism, the effects of human activity on the environment can be lessened, but this does not mean that the environment will not worsen in the future. The rebounding effect and worries about discounting make it harder for a technocentric approach to sustainable development to help protect both man-made and natural wealth reasonably. On the other hand, ecocentrism focuses on preserving natural capital for future generations by recognizing that people are inextricably linked to the natural environment. Even though ecocentrism focuses on the causes of environmental constraints, it may not be able to keep man-made assets in good shape if *degrowth* measures are put in place. So, an SM lens encourages more research on mixed methods of SD that can be used in environmental governance systems because it is hard to protect both types of assets simultaneously.

An SM approach to corporate governance to safeguard both man-made and natural assets has revealed the limitations of systems based on shareholder and stakeholder conceptions. The lack of assurance that future generations will have access to both natural and man-made assets is a significant flaw in shareholder theory-based governance systems. In contrast, stakeholder theory-based governance systems help harmonize corporate, environmental, and societal interests. For example, some companies are adopting SVC and environmental management systems to align with stakeholder theory. However, the weakness of enforcement mechanisms across corporate governance systems is evidenced by the inefficiency of CSR programs, the prevalence of greenwashing, and the persistence of corporate influence. Thus, the SM lens can be used to promote and enhance research on governance structures and SM policies that address the discrepancies between the SD and private sectors.

6. Conclusion

This paper argues that environmental and corporate governance structures intended to provide present and subsequent generations with improving accessibility towards natural and man-made assets can benefit from an SM lens, which is predicated on the conservation of man-made and natural assets and incorporates concepts of debilitated and robust sustainability.

In addition, the paper emphasized the significance of sustaining the compet-

ing needs of many actors within the theory and practice of SD and SM. The author then argued that an SM lens conceptualized SD issues through the continuum of DS and RS and established that an SM lens prioritizes the preservation of both man-made and natural assets, as both are essential to assuring the needs of future generations. In order to connect the SM lens, which identifies sustainable and unsustainable development activities, with the practical application of SM, which attempts to address unsustainable development practices, additional research will be required as SM continues to evolve.

This paper suggests that an SM lens reveals the difficulty of segregated environmental and corporate governance structures that promote a holistic understanding of sustainable development. Therefore, there is an opportunity to improve research on flexible forms of governance that promote transitions from a condition of deterioration to a continuum of sustainability, in which stakeholders safeguard man-made and natural assets for coming generations. To ensure the cumulative growth of SD, flexible governance models must continually incorporate and maximize DS and RS concepts and practices among diverse stakeholders, sectors of the economy, and ecosystems.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- Ayres, R. U., Van Den Bergh, J. C. J. M., & Gowdy, J. M. (2001). Strong versus Weak Sustainability: Economics, Natural Sciences, and "Consilience." *Environmental Ethics*, *23*, 155-168. <https://doi.org/10.5840/enviroethics200123225>
- Bansal, P., & Song, H. C. (2017). Similar but Not the Same: Differentiating Corporate Sustainability from Corporate Responsibility. *Academy of Management Annals*, *11*, 105-149. <https://doi.org/10.5465/annals.2015.0095>
- Bennett, N. J., & Satterfield, T. (2018). Environmental Governance: A Practical Framework to Guide Design, Evaluation, and Analysis. *Conservation Letters*, *11*, e12600. <https://doi.org/10.1111/conl.12600>
- Billedeau, D. B., & Wilson, J. (2021). COVID-19 and Corporate Social Responsibility: A Canadian Perspective. In W. Leal Filho (Ed.), *COVID-19: Paving the Way for a More Sustainable World* (pp. 23-41). Springer. https://doi.org/10.1007/978-3-030-69284-1_2
- Brundtland, G. H. (1987). *Report of the World Commission on Environment and Development: Our Common Future*. United Nations General Assembly Document A/42/427. <http://www.un-documents.net/wced-ocf.htm>
- Burch, S., Shaw, A., Dale, A., & Robinson, J. (2014). Triggering Transformative Change: A Development Path Approach to Climate Change Response in Communities. *Climate Policy*, *14*, 467-487. <https://doi.org/10.1080/14693062.2014.876342>
- Burroughs, W. J. (2001). *Climate Change: A Multidisciplinary Approach*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139163989>
- Chan, S., Boran, I., van Asselt, H., Iacobuta, G., Niles, N., Rietig, K. et al. (2019). Promises and Risks of Nonstate Action in Climate and Sustainability Governance. *Wiley Inter-*

- disciplinary Reviews: Climate Change*, 10, e572. <https://doi.org/10.1002/wcc.572>
- Chertow, M. R. (2000). The IPAT Equation and Its Variants: Changing Views of Technology and Environmental Impact. *Journal of Industrial Ecology*, 4, 13-29. <https://doi.org/10.1162/10881980052541927>
- Costanza, R. (1989). What Is Ecological Economics? *Ecological Economics*, 1, 1-7. [https://doi.org/10.1016/0921-8009\(89\)90020-7](https://doi.org/10.1016/0921-8009(89)90020-7)
- Costanza, R., Daly, H., Folke, C., Hawken, P., Holling, C. S., & McMichael, A. J. (2000). Managing Our Environmental Portfolio. *BioScience*, 50, 149-155. [https://doi.org/10.1641/0006-3568\(2000\)050\[0149:MOEP\]2.3.CO;2](https://doi.org/10.1641/0006-3568(2000)050[0149:MOEP]2.3.CO;2)
- Dahlsrud, A. (2008). How Corporate Social Responsibility is Defined: An Analysis of 37 Definitions. *Corporate Social Responsibility and Environmental Management*, 15, 1-13. <https://doi.org/10.1002/csr.132>
- Delmas, M. A., & Burbano, V. C. (2011). The Drivers of Greenwashing. *California Management Review*, 54, 64-87. <https://doi.org/10.1525/cmr.2011.54.1.64>
- Dietz, S., & Neumayer, E. (2007). Weak and Strong Sustainability in the SEEA: Concepts and Measurement. *Ecological Economics*, 61, 617-626. <https://doi.org/10.1016/j.ecolecon.2006.09.007>
- Dietz, T., Ostrom, E., & Stern, P. (2017). The Struggle to Govern the Commons. In P. M. Haas (Ed.), *International Environmental Governance* (pp. 53-58). Routledge. <https://doi.org/10.4324/9781315092546-4>
- Donaldson, T., & Preston, L. E. (1995). The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications. *Academy of Management Review*, 20, 65-91. <https://doi.org/10.5465/amr.1995.9503271992>
- Emetumah, F. (2017). Modern Perspectives on Environmentalism: Ecocentrism and Technocentrism in the Nigerian Context. *Asian Research Journal of Arts & Social Sciences*, 2, 1-9. <https://doi.org/10.9734/ARJASS/2017/32821>
- Folke, C., Hahn, T., Olsson, P., & Norberg, J. (2005). Adaptive Governance of Social-Ecological Systems. *Annual Review of Environment and Resources*, 30, 441-473. <https://doi.org/10.1146/annurev.energy.30.050504.144511>
- Folke, C., Jansson, Å., Rockström, J., Olsson, P., Carpenter, S. R., Stuart Chapin, F. et al. (2011). Reconnecting to the Biosphere. *AMBIO*, 40, 719-738. <https://doi.org/10.1007/s13280-011-0184-y>
- Fukuyama, F. (2013). What Is Governance? *Governance*, 26, 347-368. <https://doi.org/10.1111/gove.12035>
- GFW (n.d.). *Global Forest Watch*. <https://www.globalforestwatch.org/>
- Gibbs, D., & O'Neill, K. (2017). Future Green Economies and Regional Development: A Research Agenda. *Regional Studies*, 51, 161-173. <https://doi.org/10.1080/00343404.2016.1255719>
- Gibson, R. B. (2009). Beyond the Pillars: Sustainability Assessment as a Framework for Effective Integration of Social, Economic and Ecological Considerations in Significant Decision-Making. Tools, *Techniques and Approaches for Sustainability*, 8, 389-410. https://doi.org/10.1142/9789814289696_0018
- Gladwin, T. N., Kennelly, J., & Krause, T.-S. (1995). Shifting Paradigms for Sustainable Development: Implications for Management Theory. *Academy of Management Review*, 20, 874-907. <https://doi.org/10.2307/258959>
- Gray, R. (2010). Is Accounting for Sustainability Actually Accounting for Sustainability...and How Would We Know? An Exploration of Narratives of Organisations and the Planet. *Accounting, Organizations and Society*, 35, 47-62.

- <https://doi.org/10.1016/j.aos.2009.04.006>
- Hammer, J., & Pivo, G. (2017). The Triple Bottom Line and Sustainable Economic Development Theory and Practice. *Economic Development Quarterly*, 31, 25-36. <https://doi.org/10.1177/0891242416674808>
- Hardin, G. (1968). The Tragedy of the Commons. *Science*, 162, 1243-1248. <https://doi.org/10.1126/science.162.3859.1243>
- Hawkins, T. R., Singh, B., Majeau-Bettez, G., & Strömman, A. H. (2013). Comparative Environmental Life Cycle Assessment of Conventional and Electric Vehicles. *Journal of Industrial Ecology*, 17, 53-64. <https://doi.org/10.1111/j.1530-9290.2012.00532.x>
- Hertwich, E. G. (2005). Consumption and the Rebound Effect: An Industrial Ecology Perspective. *Journal of Industrial Ecology*, 9, 85-98. <https://doi.org/10.1162/1088198054084635>
- Herzberg, R. Q. (2020). Elinor Ostrom's *Governing the Commons: Institutional Diversity, Self-Governance, and Tragedy Diverted*. *The Independent Review*, 24, 627-636.
- Hsiang, S., & Kopp, R. E. (2018). An Economist's Guide to Climate Change Science. *Journal of Economic Perspectives*, 32, 3-32. <https://doi.org/10.1257/jep.32.4.3>
- Illge, L., & Schwarze, R. (2006). *A Matter of Opinion: How Ecological and Neoclassical Environmental Economists Think about Sustainability and Economics*. DIW Discussion Papers, No. 619. Deutsches Institut für Wirtschaftsforschung (DIW).
- Ivanova, D., Stadler, K., Steen-Olsen, K., Wood, R., Vita, G., Tukker, A., & Hertwich, E. G. (2016). Environmental Impact Assessment of Household Consumption. *Journal of Industrial Ecology*, 20, 526-536. <https://doi.org/10.1111/jiec.12371>
- Jabareen, Y. (2008). A New Conceptual Framework for Sustainable Development. *Environment, Development and Sustainability*, 10, 179-192. <https://doi.org/10.1007/s10668-006-9058-z>
- Kates, R. W., Parris, T. M., & Leiserowitz, A. A. (2005). What Is Sustainable Development? Goals, Indicators, Values, and Practice. *Environment*, 47, 8-21. <https://doi.org/10.1080/00139157.2005.10524444>
- Monga, V. (2021). What Is the Keystone XL Pipeline and Why Did President Biden Issue an Executive Order to Block It? *The Wall Street Journal*. <https://www.wsj.com/articles/what-is-the-keystone-xl-pipeline-and-why-did-president-biden-issue-an-executive-order-to-block-it-11611240342>
- Monks, R. A. G., & Minow, N. (2011). *Corporate Governance* (5th ed.). John Wiley & Sons. <https://doi.org/10.1002/9781119207238>
- Nilsson, M., Griggs, D., & Visbeck, M. (2016). Policy: Map the Interactions between Sustainable Development Goals. *Nature*, 534, 320-322. <https://doi.org/10.1038/534320a>
- Olson, M. (1965). *The Logic of Collective Action: Public Goods and the Theory of Groups*. Harvard University Press.
- Oreskes, N., & Conway, E. M. (2015). *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming*. Bloomsbury Publishing USA.
- Ostrom, E. (2015). *Governing the Commons: The Evolution of Institutions for Collective action*. Cambridge University Press. <https://doi.org/10.1017/CBO9781316423936>
- Pearce, D., Groom, B., Hepburn, C., & Koundouri, P. (2003). Valuing the Future. *World Economy*, 4, 121-141.
- Pelenc, J., & Ballet, J. (2015). Weak Sustainability versus Strong Sustainability (pp. 1-4). Brief for GSDR 2015. United Nations (UN), 2005. <https://sdgs.un.org/sites/default/files/documents/6569122-PelencWeak%2520Sustainab>

[ility%2520versus%2520Strong%2520Sustainability.pdf](#)

- Porter, M. E., & Kramer, M. R. (2006). Strategy & Society: The Link between Competitive Advantage and Corporate Social Responsibility. *Harvard Business Review*, 84, 78-92.
- Porter, M., & Kramer, M. (2011). Creating Shared Value: How to Reinvent Capitalism—and Unleash a Wave of Innovation and Growth. *Harvard Business Review*, 62-77. <http://web.a.ebscohost.com>
- Richardson, B. J. (2011). Sovereign Wealth Funds and the Quest for Sustainability: Insights from Norway and New Zealand. *Nordic Journal of Commercial Law*, 2, 1-27.
- Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a General Theory of Planning. *Policy Sciences*, 4, 155-169. <https://doi.org/10.1007/BF01405730>
- Schandl, H., Hatfield-Dodds, S., Wiedmann, T., Geschke, A., Cai, Y., West, J. et al. (2016). Decoupling Global Environmental Pressure and Economic Growth: Scenarios for Energy Use, Materials Use and Carbon Emissions. *Journal of Cleaner Production*, 132, 45-56. <https://doi.org/10.1016/j.jclepro.2015.06.100>
- Seyfang, G. (2009). *The New Economics of Sustainable Consumption: Seeds of Change*. Palgrave Macmillan. <https://doi.org/10.1057/9780230234505>
- Sikka, P. (2010). Smoke and Mirrors: Corporate Social Responsibility and Tax Avoidance. *Accounting Forum*, 34, 153-168. <https://doi.org/10.1016/j.accfor.2010.05.002>
- Smil, V. (2017). *Energy and Civilization: A History*. MIT Press. <https://doi.org/10.7551/mitpress/9780262035774.001.0001>
- Spaargaren, G., & Mol, A. P. J. (2013). Carbon Flows, Carbon Markets, and Low-Carbon lifestyles: Reflecting on the Role of Markets in Climategovernance. *Environmental Politics*, 22, 174-193. <https://doi.org/10.1080/09644016.2013.755840>
- Stafford-Smith, M., Griggs, D., Gaffney, O., Ullah, F., Reyers, B., Kanie, N. et al. (2017). Integration: The Key to Implementing the Sustainable Development Goals. *Sustainability Science*, 12, 911-919. <https://doi.org/10.1007/s11625-016-0383-3>
- Starik, M., & Kanashiro, P. (2013). Toward a Theory of Sustainability Management: Uncovering and Integrating the Nearly Obvious. *Organization and Environment*, 26, 7-30. <https://doi.org/10.1177/1086026612474958>
- Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M. et al. (2015). Planetary Boundaries: Guiding Human Development on a Changing Planet. *Science*, 347, Article ID: 1259855. <https://doi.org/10.1126/science.1259855>
- Steffen, W., Rockström, J., Richardson, K., Lenton, T. M., Folke, C., Liverman, D. et al. (2018). Trajectories of the Earth System in the Anthropocene. *Proceedings of the National Academy of Sciences of the United States of America*, 115, 8252-8259. <https://doi.org/10.1073/pnas.1810141115>
- United Nations (n.d.). *THE SDGS IN ACTION—What Are the Sustainable Development Goals?* <https://www.undp.org/sustainable-development-goals>
- United Nations Office for Sustainable Development (2020). *The SDG Partnership Guidebook: A Practical Guide to Building High Impact Multi-Stakeholder Partnerships for the Sustainable Development Goals*. https://sustainabledevelopment.un.org/content/documents/2698SDG_Partnership_Guidebook_1.01_web.pdf
- Van der Byl, C. A., & Slawinski, N. (2015). Embracing Tensions in Corporate Sustainability: A Review of Research from Win-Wins and Trade-Offs to Paradoxes and Beyond. *Organization & Environment*, 28, 54-79. <https://doi.org/10.1177/1086026615575047>
- van der Ven, H., Rothacker, C., & Cashore, B. (2018). Do Eco-Labels Prevent Deforestation?

tion? Lessons From Non-State Market Driven Governance in the Soy, Palm Oil, and Cocoa Sectors. *Global Environmental Change*, 52, 141-151.

<https://doi.org/10.1016/j.gloenvcha.2018.07.002>

Vörösmarty, C. J., McIntyre, P. B., Gessner, M. O., Dudgeon, D., Prusevich, A., Green, P. et al. (2010). Global Threats to Human Water Security and River Biodiversity. *Nature*, 467, 555-561. <https://doi.org/10.1038/nature09440>

Wang, R., Moreno-Cruz, J., & Caldeira, K. (2017). Will the Use of a Carbon Tax for Revenue Generation Produce an Incentive to Continue Carbon Emissions? *Environmental Research Letters*, 12, Article ID: 064001.

<https://doi.org/10.1088/1748-9326/aa6e8a>

Westley, F., Olsson, P., Folke, C., Homer-Dixon, T., Vredenburg, H., Loorbach, D. et al. (2011). Tipping Toward Sustainability: Emerging Pathways of Transformation. *AMBIO*, 40, 762-780. <https://doi.org/10.1007/s13280-011-0186-9>