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The Biodiversity Moonshot: A Spark for a Transformative Change or a New Business-Case Facade?

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ABSTRACT

Biodiversity has recently gained increased attention in sustainability management research. It sustains the ecosystems on which organizations depend, while simultaneously being threatened by organizational activities. By highlighting this dynamic of impact and dependence, the integration of biodiversity into management discourse offers an opportunity to foster a more holistic understanding of the business–nature relationship, grounded in a systems perspective. At the same time, however, there is a risk that biodiversity will be reduced to yet another environmental variable subsumed within the prevailing business-case logic that views nature primarily as a source of economic value. This approach has proven inadequate to drive the transformative change needed to address the environmental crisis. Drawing on a discussion among scholars, this essay outlines six critical challenges—measurement, strategic decision making, innovation, public policy, interdisciplinary approaches, and dominant ontologies—which, depending on how they are addressed, may either catalyze a rethinking of the business–nature relationship or merely perpetuate existing paradigms.

1 | Introduction

The persistence of the environmental crisis has drawn increasing attention to the multifaceted dimensions of ecological degradation. According to the United Nations, the world is currently grappling with a Triple Planetary Crisis involving climate change, biodiversity loss, and pollution (United Nations 2022). These crises are deeply interconnected, making the challenge both urgent and complex. Their interdependence underscores the inadequacy of addressing each in isolation. Instead, the imperative is to take a deep, holistic, and integrated approach, one capable of grasping the complexity of nature and its relationship to human activities (Rockström et al. 2023).

While climate emergency and pollution have long dominated sustainability discourses, biodiversity loss has only recently begun to receive increased attention among scholars in the field of sustainability management (Testa et al. 2025). In particular, scholars have highlighted that focusing on biodiversity and related concepts—such as ecosystems and the services they

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provide—can foster a more comprehensive understanding of the relationship between business and nature (e.g., Winn and Pogutz 2013; Small et al. 2022; D'Amato et al. 2018). The level of biodiversity influences the functionality of ecosystems and, consequently, their ability to provide essential services to organizations and, more broadly, to the socio-economic system. At the same time, organizations, through their use of these services, exert an impact on biodiversity and ecosystems (e.g., through waste generation, pollutant emissions, excessive extractions, etc.). This destabilizes ecological equilibria (Panwar et al. 2023). Thus, organizations degrade ecosystem stability, even as they simultaneously depend on ecosystem services (provisioning, maintenance, regulation, and cultural) for their continuity and resilience (Williams et al. 2021). Consequently, the increasing fragility of ecosystems and the ongoing loss of biodiversity are generating adverse effects on both individuals and businesses (Romanelli et al. 2015; Macellari et al. 2018). These interconnections underscore the intimate relationship between the health of natural systems and corporate—and broader human—well-being, and especially the embeddedness of organizations (and humans) in ecological systems (Dahlmann 2025).

By promoting a deeper understanding of the business–nature relationship rooted in the dynamics of impact and dependence, the growing attention to biodiversity among management scholars presents a valuable opportunity to move beyond the dominant business-case approach. This prevailing perspective tends to frame sustainability initiatives primarily in terms of the instrumental values of nature, based on their potential to generate economic returns (Schaltegger and Burritt 2018; Busch et al. 2024). However, such an approach risks distorting the nature–business relationship by placing firms at the center of the narrative, portraying them as agents that shape nature in pursuit of profitability (Hoffman and Jennings 2015; Ergene et al. 2021).

Predominant economic models have largely reinforced this anthropocentric logic, emphasizing a business-case rationale that prioritizes growth imperatives (Banerjee et al. 2021; Nyberg and Wright 2022). As a result, scholarly efforts to guide firms toward durable and ecologically balanced trajectories have often yielded limited and inconclusive outcomes (Banerjee 2011; Bansal et al. 2025). Against this backdrop, the focus on biodiversity offers the opportunity to catalyze a paradigm shift—one that embraces a systems perspective recognizing the interconnections between organizations and nature, and that avoids compartmentalizing them as separate and independent elements (Bansal and Song 2017). Within this systems view, planetary health and economic success are not competing objectives but interrelated elements of a unified path toward the prosperity of the whole socioecological system encompassing both organizations and natural capital (Williams et al. 2017).

However, this paradigm shift is far from guaranteed. There is a significant risk that the growing interest among management scholars in demonstrating the economic and financial returns of addressing biodiversity issues (e.g., Bach et al. 2025; Li et al. 2025) may ultimately reinforce the anthropocentric and instrumental logics underlying the business-case approach. In such a scenario, biodiversity risks being reduced to yet another discrete environmental variable that businesses consider solely for the purposes of cost reduction or revenue enhancement. The rhetoric of "it pays to be green," while historically valuable in legitimizing environmental concerns within the management literature, now risks reinforcing a myopic, reductionist and overly simplistic understanding of the relationship between business and the natural environment (Landrum 2018; Gray and Bebbington 2000). Rather than acting as a catalyst for a transformation of how organizations understand and relate to nature, biodiversity would remain yet another sustainability issue subordinated to the pursuit of corporate economic interests. Doing so would further entrench the already dominant business-case approach to sustainability which, though generative in some respects, has proven insufficient (or even counter-effective) for driving the profound transformation needed to confront the grand and urgent challenges posed by the environmental crisis (Wright and Nyberg 2017; Busch et al. 2024; Bansal et al. 2025). It would also continue to emphasize the predominantly managerialist, transactional, or measurement-driven approaches to biodiversity, rather than invite impactful reflection and innovation on how business should operate by conserving and regenerating nature (Hahn and Tampe 2021). As a result, the potential of management scholars to foster a meaningful rethinking of business–nature relations through the lens of biodiversity would remain largely unrealized.

In light of these considerations, two critical questions arise: Can the integration of biodiversity into management discourse catalyze a shift in how businesses perceive their relationship with nature, potentially supporting a paradigm rooted in the unified prosperity of the entire socio-ecological system? Or, conversely, will it merely reinforce the conventional business-case logic, thereby missing an opportunity for transformative change in the business–nature relationship?

The answer to these questions may depend on how management scholars address six critical challenges, identified through a highly engaged scholarly exchange during a symposium held at the 2023 Academy of Management Conference in Boston (Di Minin et al. 2023). These challenges span different yet nested levels of analysis and domains (see Figure 1) and include: (1) how biodiversity-related information is generated and measured (*measurement*); (2) how this information informs and shapes strategic business processes (*strategic decisions*); (3) how innovation is conceived and designed to support biodiversity goals (*innovation*); (4) how public policies are formulated to incentivize and support private-sector engagement in biodiversity conservation and regeneration (*public policy*); (5) how diverse scientific disciplines can be integrated to influence managerial mindsets and decision-making in response to the biodiversity crisis (*interdisciplinary approach*); and (6) how dominant ontological assumptions that separate humans from nature can be reconsidered to foster relational perspectives on biodiversity (*dominant ontologies*). Reflecting on how to address these six challenges offers a lens to critically assess whether and how the growing focus on biodiversity can catalyze a systemic rethinking of the business–nature relationship—where business adapts to fit within ecological constraints—or, alternatively, reinforces the traditional

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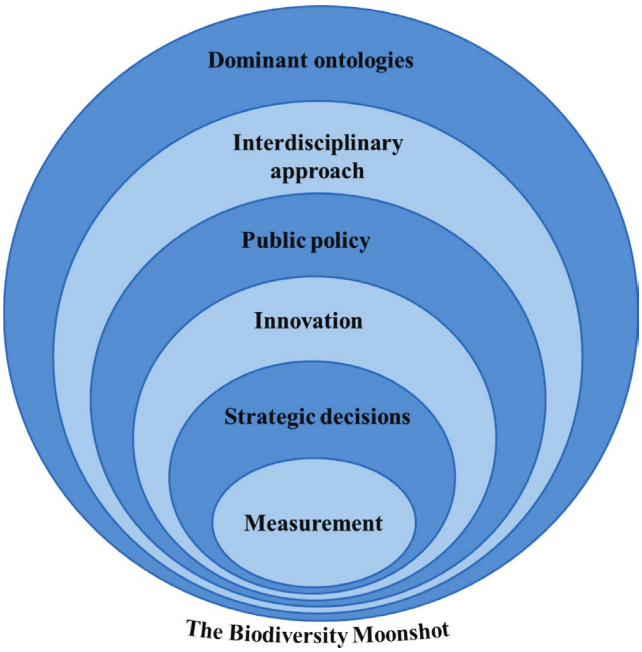

FIGURE 1 | A framework for appreciating the biodiversity challenges. [Colour figure can be viewed at wileyonlinelibrary.com]

business-case logic, in which biodiversity is merely adapted to fit within corporate priorities. This reflection guides the discussion of each challenge in the following sections.

2 | Emerging Challenges in Biodiversity Management

2.1 | Challenge 1: Measuring Biodiversity for Business

Developing measures of biodiversity for business is in the early stages of development (Schaltegger et al. 2023). The focus so far has principally aimed to develop single measures of biodiversity with the goal of simplifying biodiversity for business decision making. While intended to enhance usability, this approach risks reinforcing a business-case logic that treats biodiversity instrumentally, primarily as a means to achieve short-term benefits. Meanwhile, corporate disclosure and reporting on biodiversity have either been absent or taken this simplistic approach (Adler et al. 2018; Addison et al. 2019). For example, management accounting research has focused on the creation and use of a biodiversity/extinction disclosure index (Hassan et al. 2020, 2022; Roberts et al. 2023) or using the number of species as a proxy for biodiversity (Roberts et al. 2021). In practice, corporate environmental, social, and governance (ESG) providers offer single or limited metrics for biodiversity measurement (Zhu and Carrasco 2025). This approach mirrors what was done to develop measures for mitigating climate change; that is, businesses focus on measuring GHG emissions and aim to lower those emissions. And while sustainability measurement schemes of topics like biodiversity also need to balance the tensions between being comprehensive, accurate, practical, and feasible for managers (Wijen et al. 2025), when it comes to measuring biodiversity, a single indicator is grossly insufficient (Noss 1990). Biodiversity itself is a multi-dimensional phenomenon cutting across differences of species and population dynamics, ecosystems, habitats, and their interactions that moreover differ across local regions.

Business management scholarship therefore needs to rethink its simplistic approach of tailoring biodiversity to business strategies for disclosure and reporting and instead consider how business conceptualizes its relationship with nature, including a multi-dimensional measure of biodiversity. Current indicators do not reflect the complex reality of how business relates to biodiversity (Lyashevska and Farnsworth 2012). We advocate for drawing from the natural sciences—such as ecology, geography, and conservation biology—to reframe how business relates to biodiversity and how this relationship can be measured. The relationship between business and biodiversity is complex: first, companies influence biodiversity through their activities, operations, and sourcing practices; second, biodiversity can also impact business activities; third, companies depend directly and indirectly on natural resources and the well-being of ecosystems and species for their operations (Panwar et al. 2023; Unter et al. 2023; Winn and Pogutz 2013).

Biodiversity measurement is intricate and multifaceted, as there are a myriad of potential metrics, each possessing its unique peculiarities. There is no simple "up or down" framework. For instance, measures of biodiversity can refer to different spatial (on-site and off-site) and temporal (before and after loss) dimensions (Panwar et al. 2023) and to different elements (or levels) characterizing the natural environment, such as ecosystems and species (Kennedy et al. 2023; Schaltegger et al. 2023). Fortunately, conservation biology offers extensive metrics for biodiversity that can be adapted to the business context without losing the nuances of local context and the complexity of ecosystems and species (Addison et al. 2020). Methodological best practices from natural sciences, such as indicators from biology and spatial data and methods, can be a cornerstone for rigorous, scientifically informed business decision making regarding biodiversity.

We also advocate for drawing from place-based ecological knowledge for business decision making regarding biodiversity. Local knowledge can advance strategies that go beyond the traditional approach of merely limiting damage to ecosystems and instead transform businesses to go above and beyond and regenerate nature (Albareda and Branzei 2024; Rahman et al. 2024). Here, a systems approach is key to better understand the dynamic relationships at play between business, biodiversity, and society (Hahn and Tampe 2021; Whiteman and Cooper 2011). Drawing from natural science frameworks such as planetary boundaries is a promising avenue, as it can facilitate organizations acclimating themselves to nature as well as drive inter- and trans-disciplinary research (Lahneman et al. 2025; Whiteman et al. 2013; Williams et al. 2024).

2.2 | Challenge 2: Integrating Biodiversity Into Business Logics Through and Beyond Risk and Opportunity Recognition

Understanding, quantifying, and qualifying the relationship of impact and dependence between business and natural

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capital allows scholars and managers to consider biodiversity and, more generally, nature as not merely a pool of resources to be exploited to meet business and human needs, but rather as an integral element of socioeconomic activities, with which it is necessary to cooperate and co-evolve (Unter et al. 2023). This perspective calls for a two-way integration of biodiversity into business strategic decisions, recognizing not only how business impacts biodiversity, but also how biodiversity influences business operations and outcomes.

While the importance of biodiversity and related concepts in management research has been clearly articulated (Winn and Pogutz 2013), there are few applications of traditional management concepts to biodiversity. This is unfortunate, as such an application can help businesses engage more meaningfully with biodiversity. Risk is a good example in this context. Perceived risk shapes how a situation is interpreted by managers (Sitkin and Pablo 1992). The relationship of impact and dependence between companies and biodiversity can be cast in terms of risk. This "angle" of vision can help companies interpret their relationship with biodiversity not only from an inside-out perspective (i.e., company's impacts on the environment) but also from an outside-in perspective (i.e., environment's impact on the company). Indeed, from a risk standpoint, lower (higher) biodiversity can be linked to higher (lower) risks. Figge (2004), building on Modern Portfolio Theory (Markowitz 1952), illustrated how financial concepts can be applied to biodiversity. As this application shows, (desirable) higher yields, such as agricultural yields, can point to lower biodiversity and can be the sign of (undesirable) hidden risks. Using management indicators, tools, or theories that do not specifically account for diversification and risks, therefore risks leading to decisions that are not only suboptimal from a biodiversity point of view but also strategically flawed from a business standpoint.

Scholars have long argued against approaches that overstate the trade-offs between economic and environmental goals. We argue that the problem often lies not in the intent of decision-makers, but in the limitations of the tools they use. Put differently, it is not that decision-makers do not want to see the link between good business and sustainability, but that they cannot see the link due to the indicators and tools they use. Worse still, some indicators may unintentionally reward homogenization over ecological resilience. Ever-increasing agricultural yields due to homogenization are a prime example in this context.

Additionally, as known from finance, even capturing risks correctly does not guarantee that they are considered appropriately (e.g., Aren and Zengin 2016). Biodiversity-induced economic risks are likely to be even more abstract and difficult to understand than traditional investment risks.

Risk is an important aspect to understand when linking biodiversity and business. Nevertheless, risk, or the beneficial impact higher biodiversity has on lowering risks, is only a part of what makes biodiversity valuable. Direct use values can be comparatively easily linked to economic values. However, indirect use values, like ecosystem services, pure existence values, and bequest values (Pearce and Moran 2013) are examples of values that do not translate easily into monetary terms.

Recognizing biodiversity-related risks may help align conservation with market incentives, creating opportunities to leverage business influence for environmental good. However, concentrating on the low-hanging fruit of biodiversity-induced risks and opportunity recognition risks placing the other values of biodiversity into the background. Most business tools and frameworks remain ill-equipped to capture these dimensions.

Current managerial frameworks fundamentally struggle to internalize biodiversity due to their ingrained biases towards measurability, immediacy, and economic rationality. Insights from climate risk integration caution against embedding biodiversity solely within existing business frameworks, given the tendency of companies to translate significant environmental challenges into incremental actions rather than the transformative changes needed (Pinkse and Gasbarro 2019; Wissman et al. 2024). Weinhofer and Busch (2013), in their study of utilities, revealed how the traditional risk management approach resulted in insufficiently ambitious strategies, thereby inadequately addressing genuine risks. Similarly, Wissman et al. (2024) underscore the risk of dangerously simplifying complex ecological challenges into overly manageable scenarios, creating a false sense of security. Thus, while recognizing biodiversity within current risk frameworks provides an essential starting point, their inherent limitations suggest a fundamental inadequacy. Recent calls in climate risk scholarship suggest that genuine transformative change may demand the development of entirely new frameworks. Applied analogously to biodiversity, this would translate into frameworks that are explicitly designed to integrate ecological complexities and the multidimensional values of biodiversity.

The central challenge, therefore, lies in developing frameworks sophisticated enough to accurately convey biodiversity's ecological complexities in terms comprehensible and compelling to business decision-makers, thereby driving strategic choices that genuinely advance biodiversity preservation and regeneration.

2.3 | Challenge 3: Reorienting the Logic of Biodiversity for Innovation Through Active Intermediation

While incorporating the ecological complexity of biodiversity into strategic decision-making is essential, it is not sufficient for implementing effective solutions. Creativity and innovation practices play a pivotal role in navigating and pursuing equilibria within the intricate relationship between business and biodiversity.

Integrating innovation and biodiversity is increasingly recognized as essential for sustainable development (Paunov et al. 2024; Smith et al. 2019). It has been argued that biodiversity provides direct benefits to economic activity and innovation, serving as a crucial reservoir for research, innovation, and industrial applications, particularly in pharmaceuticals and agriculture (Swanson 1996). Moreover, although technological

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innovation to date has often contributed to biodiversity loss (e.g., through fertilizers and pesticides), nature-based solutions and bioinspired technologies now promise positive and non-destructive innovation outcomes (Lebdioui 2022).

Yet, these conceptions and practices of drawing on biodiversity to support innovation maintain biodiversity as a passive resource input. In this view, biodiversity is framed as a source of materials and information to support R&D activities and applications. This logic of biodiversity in the service of innovation is insufficient and arguably unsustainable, in that it reduces biodiversity to a resource for extraction. This portrayal fails to recognize its inherently relational nature, grounded in stewardship, reciprocity, and place-based knowledge. Despite decades of policy effort, including financial incentives, tax measures, and R&D subsidies, current approaches have failed to reconcile innovation with ecological limits. Innovation systems continue to overshoot environmental boundaries while falling short of social goals, highlighting the limits of incremental reform and the need for deeper institutional experimentation (Raworth 2017). Ironically, those with the least capacity to capitalize on bio-based innovation, often in regions where biodiversity is most abundant, are the most vulnerable to its exploitation. Without inclusive frameworks to foster access, regeneration, and benefit-sharing, innovation risks reinforcing inequality and reproducing extractive practices repacked in greener forms.

To integrate a holistic perspective, it is critical to recognize that technological innovation must be aligned with the broader goals of ecological preservation and restoration. Institutional change will be essential to facilitating an integrated approach and ensuring that multiple and often competing objectives can be reconciled as mutually reinforcing elements of a unified strategy for sustainable development. This multifaceted issue intersects various disciplines and involves both large corporations and small and medium-sized companies. Here, innovation intermediaries are crucial, providing knowledge, incentives, and expertise to guide innovation toward sustainable development.

We argue that innovation intermediaries—organizations operating between research institutions, businesses, and wider innovation ecosystems (Howells 2006)—offer a promising site for transformation. Typically, intermediaries focus on knowledge exchange, commercialization, and innovation ecosystem-building. For example, the London Biofoundry (https://www.londonbiofoundry.org/) provides access to specialized facilities, technical knowledge, equipment, hack and scale-up space, and networking resources to support new and established engineering biology companies and grow adjacent biotech communities. However, intermediaries are increasingly challenged to engage with broader sustainability and ethical concerns, especially in emerging fields such as synthetic biology and digital biodiversity. This requires a shift from conventional intermediary roles centered on translation and diffusion to roles that actively shape the direction of innovation to prioritize responsibility, inclusion, and sustainability (Holland et al. 2024). In this mode, intermediaries not only respond to societal challenges, but also help to express them, co-producing solutions with communities. Such a transformation demands engagement with a set of persistent dilemmas: how to balance ecological with economic priorities, how to navigate uncertainty, and how to address power asymmetries in innovation governance. This reorientation would contribute to the reframing of the logic of biodiversity for innovation to the logic of innovation for biodiversity. Rather than treating sustainability as a retrofit, sustainability would be embedded, from the outset, in the applied research, development, technology transfer, and business support activities undertaken by intermediaries. Practices of anticipatory governance, responsible innovation, and participatory foresight would also be called upon. This calls for structural and cultural change, from rethinking funding models and evaluation frameworks to building institutional environments that recognize biodiversity beyond a passive input.

In this context, innovation intermediaries do not merely connect actors; they actively add value to the transaction by reducing asymmetries, enabling evaluation and negotiation, and translating complex ecological and technological knowledge into actionable strategies. Intermediaries often play entrepreneurial roles, helping actors navigate fragmented information, reduce transaction costs, and unlock new market configurations through tailored solutions. This brokerage activity is not neutral: it entails shaping the direction, logic, and purpose of innovation (Benassi and Di Minin 2009).

Moving beyond a transactional function, intermediaries can help to foster a shift from extractive innovation logics—where biodiversity is mined as raw input—toward regenerative innovation, in which biodiversity is actively sustained, restored, and valorized through inclusive and place-based practices. Some proactive intermediaries are already moving in this direction. In the U.S., BioMADE (Bioindustrial Manufacturing and Design Ecosystem) is a public-private intermediary that aims to sustainably scale up companies in biotech through the development of an end-to-end, 4S- (safety, security, sustainability, social responsibility) driven, bioindustrial ecosystem (https://www.biomade.org/). BioMADE integrates attention to social responsibility as well as initiatives with schools and community colleges to provide training at scale. Another example is the UK's Earlham Biofoundry, which is a hub for genomics, synthetic biology, and data-intensive research (https://www.earlham.ac.uk/). In its missions and activities, this intermediary also amalgamates sustainability, industrial collaboration, innovation, training, and engagement with policymakers and publics.

These expanded roles require intermediaries to combine technical expertise with anticipatory governance and to act as stewards of innovation pathways that are ecologically and socially just. Thus, intermediaries become agents of systemic change, enabling organizations to internalize externalities, anticipate unintended consequences, and catalyze ecologically embedded innovation. By occupying a renewed and expanded bridging role within and across innovation systems and bioeconomies, intermediaries are well positioned to facilitate inclusive dialogue, mediate competing logics, and align innovation processes more closely with ecological realities. Their capacity to support the integration of diverse perspectives across business, the public sector, academia, and policymaking will be central to enabling a more integrated and regenerative relationship between biodiversity, innovation, and business.

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2.4 | Challenge 4: Public Policy as a Catalyst for Transformative Business–Biodiversity Relationships

Business-case logic and incremental approaches have proven inadequate for addressing the systemic drivers of biodiversity loss (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) 2024). Reversing these trends requires a radical reimagining of the business–nature relationship and recognition of nature's intrinsic value. However, private-sector coordination alone likely cannot achieve the scale of change needed for biodiversity conservation (Novacek 2008). While governments and institutions have begun to respond with substantial regulatory initiatives and funding commitments, corporate responses remain limited. Bridging this gap calls for robust policy frameworks that align ecological priorities with socio-economic development (Mäkinen-Rostedt et al. 2023; Schaltegger et al. 2023). To ensure these efforts are effective, public policy must shift from a growth-oriented paradigm toward actively shaping markets and technologies to meet societal goals, including biodiversity conservation (Bergek et al. 2023).

We suggest that public policy can be a powerful driver of transformation, especially when integrated across the regulatory, financial, and normative settings in which businesses operate.

Regulatory policy refers to government-imposed rules and oversight that enforce compliance (Baldwin et al. 2024). Shifts in regulatory policy must integrate biodiversity considerations across all sectors—finance, trade, agriculture, and beyond—to move beyond tokenistic gestures and create binding outcomes that reorient business priorities (Visseren-Hamakers et al. 2021). For example, embedding biodiversity metrics in financial regulations and mandating corporate reporting, while avoiding a one-size-fits-all approach, can encourage firms to adopt context-appropriate measures that reflect their embeddedness in ecological systems, thereby making environmental stewardship a core business concern. Regulatory frameworks like Nepal's community-managed forests have also increased forest cover and biodiversity through proactive, participatory management, with benefits for both ecological and socio-economic outcomes (Nagendra 2007).

Financial policy stabilizes economies and manages systemic risks (Bosio et al. 2022). Transformative financial policy must redirect subsidies toward economic systems that support biodiversity. Harmful subsidies—estimated at $1.4 to $3.3 trillion annually—accelerate biodiversity loss in agriculture, fisheries, and fossil fuels (IPBES 2024). Public policy can reallocate these funds toward nature-positive activities, reshaping market dynamics and making conservation economically viable (Dasgupta 2021). Moreover, funding should also guide R&D investments, incentives, and partnerships toward sectors and technologies that enhance biodiversity outcomes.

Normative policies embed ethical considerations into governance by defining standards, societal priorities, and moral imperatives (Banerjee 2022). The Kunming-Montreal Global Biodiversity Framework is one such example, framing biodiversity as a global public good and calling for change in societal values, consumption, and production. It emphasizes inclusive governance and accountability to ensure that all stakeholders—especially marginalized groups—benefit from and contribute to biodiversity outcomes (Diaz et al. 2023). By mandating stakeholder engagement and recognizing diverse values, including the intrinsic worth of nature, policy can shift businesses away from extractive models toward stewardship and regeneration (Bennett et al. 2017). These reforms embed businesses in socio-ecological systems, fostering accountability and long-term thinking.

Together, integrating regulatory, financial, and normative policies creates a powerful framework to help address the complex drivers of biodiversity loss. Regulatory policies establish enforceable standards and embed biodiversity in sectoral governance. Financial policies redirect capital flows and subsidies to reward nature-positive actions and penalize harmful practices, shifting the economic calculus toward conservation. Normative policies cultivate an ethical foundation, shaping societal values so that biodiversity stewardship becomes central to institutional purpose. Only by weaving these domains together can public policy help generate the systemic change needed to halt biodiversity decline, spur innovation, and secure equitable benefits for both people and nature. This integrated approach treats biodiversity not as a separate concern but as essential to resilient economies, just societies, and a thriving planet. To realize this vision, public policy must evolve beyond traditional economic performance metrics and align more directly with societal missions such as biodiversity protection (Kattel and Mazzucato 2018). Yet this evolution requires bridging persistent disconnects between policy design and management practice (Dwivedi et al. 2024). Collaborative approaches—such as co-designing research with policymakers—can help translate theoretical contributions into meaningful guidance for public decision-makers (Sharma and Bansal 2020, 2023).

Despite these opportunities, public policy often reinforces traditional business-case logic. Market-based mechanisms, such as biodiversity credits, exemplify this risk. While they may mobilize investment, they risk commodifying nature and embedding conservation within existing financial paradigms (Bull et al. 2022). These schemes allow businesses to continue extractive activities under the guise of sustainability, legitimizing "business-as-usual" while distracting from systemic drivers of degradation, such as growth-at-all-costs and unsustainable resource use. Similarly, policies that frame biodiversity as a risk to be managed—rather than a foundation of prosperity—tend to yield only incremental progress (Bull and Strange 2018). This may help firms avoid disruptions or reputational damage, but it does not challenge the premise that economic growth can continue indefinitely on a finite planet (Purvis et al. 2019). These policies often create the illusion of progress while leaving systems unchanged and may exacerbate social inequities, displacing Indigenous and local communities from lands designated for offsets and undermining traditional stewardship (Holmes and Cavanagh 2016).

For example, biodiversity offset markets have been linked to land grabs and human rights abuses, disproportionately harming women and marginalized groups (Büscher et al. 2012). These failures erode public trust, as ecosystems continue to decline despite corporate claims of "net gain" (Büscher et al. 2012).

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By delaying systemic transformation and reinforcing extractive models, such policies risk normalizing ecological collapse behind a market-based façade. This underscores the urgency of rejecting market-centric models in favor of integrated public policies. Policymakers must also remain vigilant: even seemingly transformative policies may, in practice, entrench existing power structures. That said, strategically designed incremental approaches can still lay the groundwork for deeper change.

The complex multidimensional setting which characterizes biodiversity loss emphasizes the unique need for coordinated policy actions. Unlike more centralized sustainability issues, biodiversity protection inherently requires coordination, as assigning clear responsibilities among individual organizations is challenging (Primmer et al. 2013; Turnhout et al. 2012). Policy development and coordination in biodiversity also lag behind areas like climate change—partly because biodiversity's impact on human activities is often less immediately visible (Visseren-Hamakers et al. 2021; Mace et al. 2015). These factors underscore both the urgency and necessity of policy intervention to prevent irreversible loss and to align organizational efforts toward shared conservation goals (Kareiva and Marvier 2012; IPBES 2024).

Safeguarding biodiversity in the 21st century requires policies that go beyond reinforcing conservation as a business case. Instead, they must drive a fundamental shift in business–nature relationships—embedding firms within ecological systems, honoring multiple values, and establishing robust accountability (Dasgupta 2021; The British Academy 2021; Dempsey and Suarez 2016). By navigating the tension between incrementalism and transformation, policymakers can create the conditions for a new paradigm: one rooted in the shared prosperity of people and nature (Pascual et al. 2021; Diaz et al. 2023).

2.5 | Challenge 5: Taking an Interdisciplinary Approach Seriously

In biodiversity, interdisciplinarity is a vital imperative, as it is throughout the environmental field (Hicks et al. 2010; Laasch et al. 2022).[1] In studying how the socio-economic system interacts with biodiversity and ecosystems, integration of management sciences with other sciences, especially natural sciences, is both an opportunity and a challenge (Winn and Pogutz 2013; Whiteman et al. 2013). The opportunity lies in using a combination of different branches of knowledge (and their respective logics) to allow phenomena to be interpreted with a more comprehensive and holistic lens. Such a lens is capable of better grasping the plurality of elements and dynamics involved. An interdisciplinary approach is therefore pivotal for a broader understanding of the business-biodiversity relationship and, consequently, to also develop more effective biodiversity-related innovation. The power and potential of such scholarship are clear.

To date, however, the challenges of interdisciplinarity have sharply limited progress in this domain. In fact, a study of 97,945 articles found no increase in interdisciplinary work in biodiversity from 1990 to 2012 (Craven et al. 2019). One reason is the limited contribution of business schools to this effort. This lack of scholarship may stem from research not being integrated with other disciplines that have greater real-world legitimacy and stature.

In many ways, the situation reflects well-documented barriers to interdisciplinary research throughout academe. These include difficulties in adopting common nomenclature, navigating faculty promotion systems, and establishing collaborative relationships. Daniel et al. (2022) identified three categories of barriers: disciplinary differences, professional integration, and collaborative practice. Disciplinary differences include communication discrepancies and conflicting paradigms. Poor professional integration hinders interdisciplinary research, as researchers outside precise disciplinary boundaries may struggle to integrate into professional communities and pursue consistent career paths. Finding and establishing collaborative relationships with researchers from other disciplines is also challenging due to their absence from typical disciplinary networks. All of these barriers are manifest with respect to biodiversity.

What can we do to break interdisciplinary research out of this scholarly cage?

To begin, management scholars must do something to which they are not accustomed: they must admit their own ignorance. Given how little the typical business scholar knows about biodiversity, why not start with learning and education? These can lay the foundation of a pathway aimed at stimulating interdisciplinary. To date, biodiversity education in business schools remains underdeveloped, not even keeping pace with other facets of sustainability (Navarro-Perez and Tidball 2012). Recently, Russo et al. (2024) have identified steps toward "thinking globally, convening locally." Seminars designed for broad faculty and researcher audiences, jargon-free and fit for wide consumption are a good place to start. This, however, is the easy part.

A second step would be to identify classes and eventually programs that are distinctly interdisciplinary—and which could lead to research opportunities. For example, to promote interdisciplinary research for biodiversity restoration and enhancement, an action plan should start in the classroom by integrating biology students into business courses or making courses interdisciplinary with lectures on both management and natural sciences. Interdisciplinary faculty seminars can also provide diverse scientific perspectives and foster dialogue and connectivity among different disciplines.

The far greater challenge is to confront academic rituals that have deferred interdisciplinary biodiversity research to the point of crisis. We take the position that the path to interdisciplinarity does not begin with, and may not even pass through, changing the reward structure in business schools. First and foremost, it instead requires cultural change. Business schools generally cast biodiversity into the role of an externality that, like the black sheep of the family, is conveniently kept out of mind. One way to overcome this neglect is to radically change the physical layout of business schools. A few universities house biological laboratories and business schools in the same building to stimulate interdisciplinary contexts and collaborations. In this context, any scholar with an ounce of curiosity would envision important research questions that span disciplines. Such

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"radical interdisciplinarity" (Russo et al. 2024) is fundamental to producing truly consequential research.

Given the urgency of change, eloquently expressed by early career scholars (Baudoin et al. 2023), we must honestly face a central question: Are modern business schools a proper and productive location for this interdisciplinary biodiversity research? After all, outside academia, cross-disciplinary teams are common and effective. Just to cite one example, in the energy sector, engineers, planners, environmental scientists, and lawyers routinely collaborate on new generation facilities. Are business schools simply incapable of implementing the structural reforms necessary to recognize, prioritize, and reward biodiversity research? One thing is certain: if change unfolds at anywhere near the glacial pace we've experienced to date, the answer will be no.

We can accept that our failure to date illustrates the general futility of management scholars in biodiversity research, and let that field advance in ways that are independent of the management sciences. But if business schools are going to grow into institutions that recognize their collective role in the loss of biodiversity, and their responsibility to do something about it, we will need a surge in academic entrepreneurship that energizes the necessary cultural and structural transformation. Launching this scholarly revolution demands that we recognize an undeniable truth: modern business schools are constrained far less by a lack of resources than by a lack of imagination.

2.6 | Challenge 6: The Economic System and Dominant Ontologies

Forging a sustainable future necessitates a fundamental shift in how humans and companies perceive their relationship with nature, beyond a simplistic indicator captured in an accounting statement. Subverting the dichotomy between humans and nature that characterizes the anthropocentric narrative and related economic models implies a new and different conception of progress, development, and prosperity (Banerjee and Arjaliès 2021).

Consequently, any answers to the two questions that motivated this paper—whether integrating biodiversity into management discourse can transform the business-nature relationship or whether business logic will prevail by framing biodiversity as another business opportunity—must address the proverbial elephant in the room: the political economy of capitalism that frames business-nature relationships. Can the destruction of biodiversity be prevented without addressing the political-economic system of capitalist relations that destroys it? A remarkable feature of the current economic system is that it sells itself as the only reasonable solution to biodiversity destruction, a problem it has created (Moranta et al. 2022). It is unlikely that the five other pathways we have proposed to integrate biodiversity—measurement, strategic decision making, innovation, public policy, and interdisciplinary approaches—can lead to transformative business-nature relationships in a political economy of endless growth, private property rights, resource exploitation, business efficiency maximization, and shareholder value runaway increase, all of which inevitably favor making a business case for biodiversity. Under capitalist relations, both extraction of value from land and conservation of land for biodiversity preservation are based on Western relational ontologies that separate humans from nature. Market preferences cannot determine the value of nature if there is to be a genuine transformation of human-nature relationships; instead, what is needed is a collective reimagination based on the radical interconnection of all living and non-living beings.

In this regard, it should be noted that the relationship with the land under social relations of capitalism, although dominant, is by no means universal: for instance, Indigenous communities all over the world have profoundly different relationships with land, which is not based on a human-nature separation and where land and nonliving entities are seen as family, not just as productive assets. Indigenous worldviews reflect a relational ontology, according to which human and nonhuman beings co-constitute the world (Ergene et al. 2021). This means that there is no separation between the observer and the observed, between human and nonhuman. Biodiversity has not been protected through market systems or state policies but instead through collective, spiritual, and reciprocal connections with animals, forests, rivers, the living, and the nonliving, as well as by an ethos of custodianship for unborn generations (Arjaliès and Banerjee 2024). In contrast, Western approaches to biodiversity conservation are based on a worldview that separates nature from humanity and sequestering large tracts of land as 'Protected Area' often accompanied by the expulsion of its Indigenous inhabitants. This dehumanization of nature reflects colonial forms of conservation which have ensured that biodiversity loss continues unabated.

Relationality has been the basis of court challenges by some Indigenous communities to grant legal personality to rivers and mountains. For example, a New Zealand court ruled that the Whanganui river must be treated as a living entity because of its relationship to the Māori people who considered the river as their ancestor. The Māori community claimed'ownership' of the river in the courts because of the government's plan to privatize the water for power generating companies, thus transforming an 'ancestor' into private property (Van Meijl 2015, 219). However, merely granting personhood through Rights of Nature laws does not guarantee protection given difficulties with enforcement, funding limitations, and asymmetries in political power.

Without a fundamental shift that questions the epistemological and ontological assumptions of our dominant economic paradigm, perhaps it would be better to focus our research attention on extinction and collapse and not on conservation. Drawing inspiration from Indigenous peoples, management scholars should contribute to fostering a relational ontology of the firm, enabling a reevaluation of prevailing profit-driven growth paradigms in favor of a new framework that recognizes the interconnected well-being of companies and nature, rooted in dynamic equilibria.

3 | Concluding Remarks

The "Biodiversity Moonshot" should be understood as both a symbolic and practical catalyst for a profound rethinking of the business–nature relationship. Rather than a mere branding

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exercise, it represents an urgent call to reimagine the foundations of corporate purpose, strategy, and systems. This reimagination must recognize ecological interconnection and planetary limits, as well as boundaries of competitive advantage. In this essay, we have articulated this ambition through six critical challenges. These challenges span multiple, nested levels of analysis—ranging from tools and practices to worldviews—and together provide a comprehensive framework for examining whether, and how, biodiversity can catalyze a systemic reconfiguration of business–nature relations. In particular, we emphasized that the way these challenges are addressed can either reinforce or hinder a transformative shift in the relationship between organizations and nature.

The first two challenges concern the integration of biodiversity into business operations and strategies. Developing multidimensional measures of biodiversity (challenge 1) is crucial to avoiding reductive metrics that distort or oversimplify complex ecological realities. This entails drawing on ecological science and place-based knowledge to design indicators that can inform managerial action and strategic decision-making. Thus, once meaningful data exist, a second challenge arises: how biodiversity information is interpreted and integrated into business strategy (Challenge 2). Conventional risk–opportunity frameworks offer a useful entry point but often limit a deeper understanding of biodiversity as they are shaped by a business-case logic. Moving beyond such framings requires developing expanded frameworks that make ecological complexity intelligible and relevant for strategic reflections, without flattening its meaning.

The next two challenges focus on enabling factors that involve external actors beyond the firm. The third challenge calls for a new innovation logic for biodiversity—one that no longer treats it as a passive input, but embeds it within R&D and technology transfer processes. This shift can foster regenerative business models, with innovation intermediaries acting as key agents of change, enabling more inclusive, context-sensitive, and ecologically attuned innovation trajectories. Moreover, public policy (Challenge 4) must transcend growth-focused priorities and market-based mechanisms to align interventions with broader societal and ecological missions. Integrating regulatory, financial, and normative instruments is key to embedding biodiversity within institutional purpose and framing it as a foundation for long-term socio-ecological well-being.

The final two challenges concern a shift in both the approach to understanding the business–biodiversity relationship and its conceptualization. Embracing interdisciplinarity (Challenge 5) across academic research, organizational decision-making, and management education is essential to overcome disciplinary silos and foster more inclusive, pluralistic understandings of the human–nature relationship. This calls for epistemic openness and rethinking the structures and norms that shape academic and managerial knowledge.

However, addressing these challenges—while necessary—is not sufficient. The final and overarching challenge concerns the dominant ontological foundations of the current political-economic system (Challenge 6). As long as business operates within a capitalist framework rooted in growth imperatives, instrumental logics, and human–nature dualisms, any integration of biodiversity will likely be superficial or subordinated to extractive models. Research must therefore focus on radically challenging prevailing narratives and economic policy assumptions, envisioning a new paradigm rooted in interconnectedness and genuine socio-ecological prosperity.

Tackling the Biodiversity Moonshot, then, demands not just better management, but a new imagination of what business is and what it is for.

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Endnotes

[1] Interdisciplinary research can be defined as "the synergistic combination of two or more disciplines to achieve one research objective" (Daniel et al. 2022).

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