Corporate actors, the UN Sustainable Development Goals and Earth System Governance: A research agenda

ABSTRACT. The Anthropocene requires significant shifts and innovation in policy as well as human action and behaviour. While much research attention has focused on society and policy makers, we know significantly less about how businesses exercise agency as part of Earth System Governance such as their contribution to the UN Sustainable Development Goals. Concerns are mounting over how large corporations are being governed and how businesses generally should operate in the Anthropocene. In this Perspective, we outline three potential high-impact areas for interdisciplinary research: *i) Integrating global goals into corporate target-setting; ii) Integrating global goals into codes of corporate governance; iii) and Integrating global goals into new business models.* We argue that understanding the role that corporate actors play in Earth System Governance is of vital importance to ensure efforts and outcomes are effective and equitable.

KEYWORDS. Earth System Governance; UN Sustainable Development Goals; corporations; goals; corporate governance; sustainable business models; research agenda

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The emergence of the 'Anthropocene' indicates an important shift in academic debates around the notion of sustainability (Malm and Hornburg, 2014; Patterson et al., 2017). Following comprehensive assessments of the rapid rates of environmental change (Steffen et al., 2004; 2015) towards a planet whose state is quantitatively and qualitatively different (Rockström et al., 2009; Steffen et al., 2011; Steffen et al., 2018), 'Earth System Governance' (ESG) provides a framework for developing new insights into governing this coupled socio-ecological system (Biermann et al., 2009; 2012a, b; 2016; Galaz et al., 2012). Earth system governance is defined as

> *"the interrelated and increasingly integrated system of formal and informal rules, rulemaking systems, and actor-networks at all levels of human society (from local to global) that are set up to steer societies toward preventing, mitigating, and adapting to global and local environmental change and, in particular, earth system transformation, within the normative context of sustainable development"* (Biermann et al. 2009, p.4).

In this context, the agreement of the Agenda 2030 and associated UN Sustainable Development Goals (SDGs) have been identified as holding significant potential

towards shaping ESG (Biermann et al., 2017; Stevens and Kanie, 2016; Griggs et al., 2013; Kanie and Biermann, 2017) in a way that recognizes the complex interdependencies between environmental, social and governance concerns (Boas et al., 2016; Nilsson et al., 2016; Stafford-Smith et al., 2017; TWI2050, 2018).

A key interest to researchers in this area is identifying and understanding the role and impact of different actors and agents in defining *who* governs the earth system and *how* (Betsille al., 2011; Dellas et al., 2011). Yet while much attention has focused on society and policy makers (e.g., Bai et al., 2016; Folke et al., 2016; Patterson et al., 2017), we know significantly less about how businesses exercise agency as part of ESG (Bouteligier 2011; Lim et al., 2018) and specifically how they contribute to the UN SDGs (Kolk et al., 2017). Concerns are mounting over how large corporations are being governed (Mayer, 2016; Mayer et al., 2017) and how businesses generally should operate in the Anthropocene (Albareda and Waddock 2018; Dyck and Greidanus 2016; Hoffman and Jennings 2015, 2018; Whiteman et al., 2013; Whiteman and Yumashev, 2018; Wright et al., 2018). As finance, economics and management underlie much of human social activities, the role of business and corporate actors in achieving the SDGs needs to be examined (Shrivastava et al., 2019).

While a significant body of literature focuses on the notions of 'corporate social responsibility' and 'corporate sustainability' (see, for example, Bansal and Gao, 2006; Bansal and Song, 2017; Lozano et al., 2015; Mitchell et al., 1997), the broader implications of the Anthropocene and the role of corporate actors in engaging with and supporting ESG by contributing to the UN SDGs remain significantly less well understood. Assessments of the global challenges of the Anthropocene suggest that improvements in individual business practices are no longer sufficient (Dyllick and Muff, 2016; Heikkurinen and Mäkinen 2018; WEF, 2018); instead, effective ESG will require system-level shifts in collective and collaborative agency and action (Dellas et al., 2011; Valente, 2015), as well as new financial and business models that are compatible with the "requirement of flourishing life on Earth" (Shrivastava et al., 2019, p.30).

In this paper, we outline three areas where we believe greater academic enquiry is likely to lead to significant new insights into how corporate actors display responsibility and accountability regarding ESG.

Integrating global goals into corporate target-setting

First, the UN SDGs have been heralded as an innovative form of global governance through goal-setting which departs from and complements more traditional governance

approaches such as norm-setting and rule-making (Biermann et al., 2017; Stevens and Kanie, 2016; Kanie and Biermann, 2017). Advantages of governance through goals include setting priorities for attention and resources, galvanizing efforts, benchmarking and progress tracking, as well as overcoming short-termism (Young, 2017).

While there is significant research on how policy makers address the complexities from the interdependencies between spatial, temporal and contextual factors of such goals (Boas et al., 2016; Nilsson et al., 2016; Stafford-Smith et al., 2017; TWI2050, 2018), what is less well understood is how companies should translate and integrate the UN SDGs into their strategies and business models (Muff et al., 2017).

More importantly, the process of setting organizational performance targets has been central to management practice for decades (Cyert and March 1963; Hamel and Prahalad, 1992; Locke and Latham, 1990), but the adoption of a variety of sustainability targets, particularly as part of executive remuneration schemes has been a more recent phenomenon (Berrone and Gomez-Mejia, 2009; Dahlmann et al., 2017; Ioannou et al., 2016; Kolk and Perego, 2014; Maas, 2018; Maas and Rosendaal, 2016; Pinkse and Busch, 2013; Pinkse and Kolk, 2009). Encouraged and supported by the emergence of a wide range of networked governance arrangements (Albareda and Waddock, 2018) – for example, initiatives on reducing greenhouse gas emissions (Science-Based Targets)

and deforestation (Forest500), or increasing renewable energy (RE100), energy productivity (EP100), and electric vehicles (EV100), and other sustainability metrics (Pivot Goals) – companies have started adopting goal-setting approaches that seek to emulate the presumed effectiveness of "Big, Hairy, Audacious Goals" (BHAGs) in the context of corporate sustainability performance (Collins and Porras, 1994; Peters and Waterman, 1982).

The key question, however, is whether such "siloed" target-setting approaches are effective given our emerging understanding of the functional linkages and interdependencies inherent in biophysical and socioeconomic systems (Griggs et al., 2014; Nilsson et al., 2016; Stafford-Smith et al., 2017)? More concerning, Lim et al.'s (2018) research highlights that corporations as central actors (and arguably causes of the Anthropocene) explicitly feature only once in the UN SDGs as part of target 12.6[1], while being more implicitly acknowledged in other targets such as 8.2[2] and 8.4[3]. There have been various efforts to highlight the commercial opportunities from integrating the UN SDGs (e.g., Business & Sustainable Development Commission, 2017), high-profile

[1] SDG target 12.6: Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.
[2] SDG target 8.2: Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors.
[3] SDG target 8.4: Improve progressively, through 2030, global resource efficiency in consumption and production and endeavour to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programmes on sustainable consumption and production, with developed countries taking the lead.

endorsements (e.g., Business for 2030; International Chamber of Commerce; UN Global Compact; World Business Council for Sustainable Development), and efforts to support decision-making (e.g., SDG Compass; Gapframe); however, assessments of the general awareness and uptake by the global private sector remains ambiguous, limited in scale or largely anecdotal (ICC, 2018; PwC, 2018; WBCSD, 2018).

Endowed with significant power but also hampered by a lack of attention to multiple scales (Bansal et al., 2018), there are questions whether and how companies can possibly reconcile multiple and connected corporate impacts on people, planet and prosperity while at the same time satisfying their overriding raison d'être of (short term) profit and shareholder returns (Kourula et al., 2017; Whiteman et al., 2013). While extant research suggests that businesses increasingly recognize the various economic and strategic benefits from managing "triple bottom line" impacts, such approaches are predominantly driven by corporate assessments of the "business case for sustainability", rather than concerns for finding solutions to global challenges that may require departure from "business as usual" (Dyllick and Hockerts, 2002; Dyllick and Muff, 2016; Scheyvens et al., 2016; Shrivastava, 2018). Moreover, an extensive literature has studied how companies respond to various sustainability issues separately (Mura et al., 2018), yet there is very little research on whether they consider these issues systemically in an integrated manner (Halme et al., 2018; Whiteman et al., 2013).

This points to a need for increased scholarly engagement with the corporate perceptions of high-level issues such as the Anthropocene, ESG and the UN SDGs. It also calls for a better understanding of whether and how sustainability goal-setting could be more effectively transposed into the corporate sector. Which, if any, goals and targets should companies set themselves to achieve coherence with implementing the SDGs at national and international levels? How should they be monitored and by whom? How could SDG performance metrics indicators for business be standardized? For example, is the recent announcement by the World Benchmarking Alliance to develop five benchmarks on climate and energy, seafood, food and agriculture, gender equality and empowerment, and digital inclusion by 2020 a useful and sufficient step into the right direction (SDG Knowledge Hub, 2018a)? How will the UN Development Programme's (UNDP) SDG Impact Management Standards help attract and steer investors and businesses towards implementing market-based solutions for the SDGs (SDG Knowledge Hub, 2018b)? Goals and targets are important policy and management tools, but the complexity of different issues demands a coherent assessment of their overall efficacy.

Integrating global goals into codes of corporate governance

Secondly, we shift our attention to the interactions between different governance

arrangements for effective implementation of the SDGs. Specifically, while recognizing existing legal and stakeholder perspectives of corporate responsibility, we argue that ESG represents a challenge to the dominant accounts of corporate governance which treat companies as individuated actors. The realization that companies are part of a system or whole questions assumptions about how corporate responsibility should be discharged. Moreover, even inclusive corporate governance models based on stakeholder perspectives remain silent on the need for systemic integration into wider networked governance systems such as UN Global Compact, Global Reporting Initiative, International Integrated Reporting Council and the International Organization for Standardization as well as a multitude of other initiatives focused on specific industries, specialized sectors, and issues (Albareda and Waddock, 2018; Biermann, 2014). The divisions based on differentiated roles and responsibilities of different stakeholders and actors seemingly contradict the logic of an interconnected system, where distributed responsibility ultimately lies at the species level.

Acknowledging the three evaluation criteria of good, effective and equitable governance (Biermann et al., 2017), there is therefore a need to examine the role that national and international voluntary corporate governance codes as well as rules and regulations play in supporting the implementation of the SDGs. Specifically, are these formal and informal governance systems cognizant and aligned with the demands of broader ESG? Examples such as the UK Corporate Governance Code, but also G20/OECD Principles

of Corporate Governance, the ICGN Global Governance Principles and Global Stewardship Principles and the UNCTAD Guidance on Good Practices in Corporate Governance Disclosure may provide insights into the wider dissemination and integration of UN SDGs in "formal and informal rules, rulemaking systems, and actor-networks" (Biermann et al. 2009, p.4) and designed to steer human impacts on the planetary system (Biermann, 2014).

Specifically, should voluntary codes of conduct as well as international standards be revised to support implementation of the SDGs? How do international sustainability agreements impact companies' corporate governance systems? How could international institutions and trade agreements reflect and integrate greater action on the SDGs? Ultimately, the aim would be to develop guidance for implementation and monitoring that provides wide-ranging action coherence between governance codes and the SDGs.

Integrating global goals into new business models

Third, beyond the role of individual for-profit organisations, we also witness the emergence of a range of private-actor networks and initiatives (Albareda and Waddock, 2018) designed to transform companies' underlying business models. Most businesses consider the natural environment and people as resources to exploit, to accomplish short-term profit-maximization purposes and goals: "Their dominating self-centered

orientation leads to decision paralysis that produces ecological and social destruction on a large scale" (Shrivastava et al., 2019, p.28). Examples of new private-actor networks include 'B Lab' and its 'B Corp certification', the initiatives based on the concepts of 'Shared Value', 'Net Positive', and 'Future Fit' business benchmark as well as the 'Conscious Capitalism' and 'Blueprint for a Better Business' movements.

Many of these private-actor networks partially emerged in response to critiques of business and capitalism following the global financial crisis and failing political efforts to address social and environmental challenges. They are founded on a variety of philosophies, codes and social movements, and offer concrete action frameworks, business templates and other practical guidance such as audit and certification to improve businesses' legitimacy in society (Gehman and Grimes, 2017; Parker et al., 2018; Stubbs, 2017a, b; 2018). We define these networks as "purpose ecosystems" due to their shared efforts to redefine the purpose and nature of business and focus upon broader non-financial performance outcomes. While none of them explicitly refer to ESG as part of their purpose or mission, they all seek to address wider social and environmental issues and concerns through the capacity of for-profit organisations. Typically, this is achieved by inspiring or prescribing new forms of sustainable business models or frameworks.

Broadly, companies operating with sustainable business models attempt to incorporate a more 'sustaincentric orientation', defined "as an ongoing process of equitably including a highly-interconnected set of seemingly incompatible social, ecological, and economic systems through [multiple] stakeholders operating as a unified network or system" (Valente, 2012, p.586). Implicit in this definition is the acknowledgement that a sustaincentric perspective goes beyond traditional classifications of 'reactive' and 'proactive' adoptions of (primarily) environmental orientations (Aragón-Correa and Sharma, 2003; McWilliams and Siegel, 2000; Winn and Angell, 2000). Instead, it incorporates the dimensions of wider social, ecological, and economic inclusion, interconnectedness and equity into a firm's sphere and concern of operations (Dyllick and Muff, 2016; Gladwin et al., 1995; Hoffman, 2003; Starik and Rands, 1995; Valente, 2012).

A core implication is that firms need to adopt sustainable business models and work within collaborative stakeholder networks rather than act as purely economically-focused organizations (Stubbs and Cocklin, 2008). In other words, competitive advantage is achieved by "linking cognitive complexity and network-based structures with the strategic endeavors of the firm" (Valente, 2012: 584).

Despite growing research into the emergence of such sustainable business models (Stubbs, 2017a, b; 2018), to the best of our knowledge there is little evidence of and insight into what role purpose ecosystems play in collectively orchestrating, shaping and supporting the wider sustainability transition (Bengtsson et al 2018; Loorbach and Wijsman, 2013). How compatible are these different private-actor networks, and are they collaborating or competing towards the/a common good? What, if any, role is there for these networks as actors and agents in ESG? How do these networks obtain authority and legitimacy? What rules, norms, values, standards and principles are they proposing and promoting? To what extent is their agency global and inclusive? And how exactly is this translated into their associated business models?

In sum, the Anthropocene fundamentally challenges how we continue to develop our businesses, society and economy. While much research is addressing these questions from a "top-down" perspective, understanding the role that companies play as private actors in supporting effective and equitable ESG is of vital importance for policy makers and society. It also offers significant trans- and interdisciplinary research opportunities for scholars interested in the interactions between governance, management and social studies. In the wake also of broader debates about the role of business and capitalism contributing to societal progress and the Anthropocene (Malm and Hornborg, 2014; Pichler et al., 2017; Wright et al., 2018), we hope our Perspective

initiates debate and serves as a starting point for greater action coherence among academics as well.

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