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CORE ANALYSIS

What the actual ....? Tensions in the science–business–policy interface for global sustainability

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Abstract

Interactions of global change science, business and policymakers play a crucial role in shaping today's regulatory frameworks for corporate sustainability. Our research question is why sustainability might actually be undermined by the ways that some prominent interfaces are informing corporate sustainability. Concentrating on 'science-based' initiatives that prescribe quantitative target-setting, business-driven task forces that define frameworks for businesses to assess and disclose information on strategies and targets, and the European Union (EU) as a supranational policymaking power, we scrutinise concepts, debates and developments involving these three globally influential non-state actors.

Although the conceptualisation of sustainability as a safe and just space is well established in academic and policy contexts, key premises are being lost in translation at science–business–policy interfaces, delaying or actually deflecting regulation of business. We call for science–business–policy interfaces to conceptualise *corporate sustainability* as business contributing to mitigating planetary biophysical pressures and securing social foundations worldwide. In this context, we argue that the research basis for 'safe and just' cannot be reduced to simplistic and separate quantifications. Treating global sustainability goals as an itemised checklist for business action, and using scientifically narrow and overly reductive approaches to quantification and target-setting, fall short of this systemic understanding of corporate sustainability.

The recognition of risks of unsustainability and the desire for sustainable value creation can act as drivers for change. Paradoxically, today's business concept of 'sustainable value' actually undermines the potential for transformations to sustainability, and the dominant finance-driven treatment of 'sustainability risks' fall far short of capturing the hazards of continued unsustainabilities. In examining what the EU is actually doing, we find that the EU's unprecedented attempts at regulating business for sustainability are being thwarted through powerful lobby interests, the outcomes of the science–business–policy interface, and the EU's own fixation on economic growth and finance.

Sustainability involves dealing justly with today's unsafe conditions, and dealing safely with unjust conditions. This requires radically more innovative responses from business, truly sustainability-oriented adaptive leadership from policymakers, and critically reflexive transdisciplinary engagement by a much wider range of sustainability scholars.

Keywords: business law; corporate sustainability; planetary boundaries; social foundations; global change science

1 Introduction

Global governance today relies explicitly on business action to mobilise a transition to a sustainable world, which has long been understood as meaning an environmentally safe and

socially just world. The Brundtland Report,[1] a canonical text in sustainability policy, states: *'Sustainable development aims to promote harmony among human beings and between humanity and nature'*.[2] Its call for *'action on the part of individuals, voluntary organizations, businesses, institutes, and governments'*, established a mandate for science–business–policy interfaces for sustainable development, initially with a local impetus.[3]

Our concern, in this decade of action for global sustainable development goals,[4] is that some science–business–policy interactions that are dominating current regulatory debates about corporate sustainability can, paradoxically, undermine the potential for transformations to sustainability. Our aim is to scrutinise these debates, identify tensions and emergent risks that they present to sustainability, and suggest approaches that are more broadly grounded in sustainability research on multiple levels.

We concentrate on three actor groups in their interconnected roles. *The global change science community* occupies an influential position in diagnosing unsustainability and informing global sustainability goal-setting, notably through articulations of what constitutes a 'safe and just operating space'. The challenges of translating scientific insights to policy-relevant messages are far from new to sustainability research,[5] but they are heightened in today's global-scale transdisciplinary interfaces. *Business*, by which we mean the organisation of commercial activity in all its varieties, is explicitly highlighted in global sustainability policymaking as a vitally important actor. Corporations with global reach often get particular science and policy attention,[6] but also activities of 'local' business are globalised through trade and information networks and value webs. *The European Union (EU)*, as a non-state policymaker, self-presents and is regarded as 'leading' on business and sustainability. It emphasises the importance of 'undeniable scientific evidence' in guiding its work.[7] The EU has unprecedented regulatory ability and power compared to both nation states and international law regimes. The EU is actively engaging in Earth system governance, which can broadly be understood as the setting of environmental policy in the context of anthropogenic Earth system change.[8] For example, the European Commission's 8th Environment Action Programme to 2030 includes the explicit framing of living 'within planetary boundaries'.[9]

[1]World Commission on Environment and Development (WCED), *Our Common Future* (Oxford University Press 1987) 51.

[2]Ibid., 65.

[3]UN, *UN Agenda 21* (United Nations Conference on Environment & Development 1992) 347.

[4]A Guterres, 'Remarks to High-Level Political Forum on Sustainable Development' (High-Level Political Forum on Sustainable Development, UN headquarters, 24 September 2019) <https://www.un.org/sg/en/content/sg/speeches/2019-09-24/remarks-high-level-political-sustainable-development-forum> accessed 4 January 2024; UN, *Decade of Action* (United Nations Sustainable Development 2020).

[5]Eg, DW Cash et al, 'Knowledge Systems for Sustainable Development' 100 (2003) Proceedings of the National Academy of Sciences 8086; SE Cornell et al, 'Opening up Knowledge Systems for Better Responses to Global Environmental Change' 28 (2013) Global Environmental Change 60; JC Havstad and MJ Brown, 'Neutrality, Relevance, Prescription, and the IPCC' 31 (2017) Public Affairs Quarterly 303.

[6]G Whiteman et al, 'Planetary Boundaries: Ecological Foundations for Corporate Sustainability' 50 (2013) Journal of Management Studies 307; H Österblom et al, 'Transnational Corporations as "Keystone Actors" in Marine Ecosystems' 10 (2015) PLOS ONE e0127533; H Österblom et al, 'Transnational Corporations, Biosphere Stewardship, and Sustainable Futures' 47 (2022) Annual Review of Environment and Resources 609.

[7]European Commission, 'Press Release: The European Green Deal' (2019) (19 December 2019) <https://ec.europa.eu/commission/presscorner/detail/en/ip_19_6691>.

[8]F Biermann, 'Planetary Boundaries and Earth System Governance: Exploring the Links' 81 (2012) Ecological Economics 4; H Ahlström and SE Cornell, 'Governance, Polycentricity and the Global Nitrogen and Phosphorus Cycles' 79 (2018) Environmental Science & Policy 54.

[9]Decision (EU) 2022/591 of the European Parliament and of the Council of 6 April 2022 on a General Union Environment Action Programme to 2030 (2022) PE/83/2021/REV/1. OJ L 114, 22–36. See also the emphasis on international industrial leadership, climate diplomacy and climate finance 'for the planet' in the EU green deal delivery plan, summarised in the brochure: European Commission, 'European Green Deal' <https://ec.europa.eu/commission/presscorner/api/files/attachme

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Interactions between these three influential global actors shape current understandings, practices and regulation of 'sustainable business'. We are seeing a tendency for problematic transfers of concepts between different domains of scholarship (notably, between a particular branch of physical Earth science and other natural and social sciences) and from academic to action contexts. Accordingly, we see a need to scrutinise these developments critically. When critical scrutiny is lacking, oversimplified understandings can be deployed for deflecting attention and delaying action.

For our interdisciplinary critique, we combine an Earth system science perspective on global environmental change with a sustainability law perspective on regulation and governance of business. In bringing together environmental science, social and legal studies and real-life context into a broader conversation on sustainable business, we need to be clear about the basics within each contributory domain. Our starting premise is that setting the scope of sustainability must draw meaningfully on much more broadly based sustainability research than is actually happening now. In Section 2, we outline our research-based understanding of sustainability as a safe and just space for humanity. We observe with concern a trend where important research-based insights are simplified into blunt 'science-based' targets and prescriptive recommendations, informed by overly narrow segments of global change science and sustainability scholarship. We also discuss how fundamental aspects of sustainability are recognised in international laws and policies, yet are not sufficiently emphasised, prioritised and implemented, often leaving sustainability as future-oriented aspirations.

In Section 3 we turn to what a safe and just space means for business. We introduce a research-based understanding of corporate sustainability. In our analysis, we focus on the science-business interface, and discuss two key concepts in the discourses on governance and regulation of business for sustainability: sustainable value creation, and what often paradoxically are denoted sustainability risks.

In Section 4, we concentrate on regulatory policy for sustainable business. Viewing the EU as a global actor, we outline how the EU interacts with globalised business and the global change science community, revealing tensions in the discourses and deployments of narrowly defined 'science-based' approaches to sustainability. We show, through an illustrative analysis of a representative selection of law and policy initiatives since the financial crisis of 2007–2008, how the EU is increasingly aware of the need for regulating business and finance for sustainability, and how its initiatives are informed and constrained by specific business-science interactions.

Section 5 gives our concluding reflections. Placing particular attention on the role of sustainability scholarship, we sketch our recommendations for navigating science–business–policy interactions and invite further interdisciplinary debates.

2 What is sustainability science saying?

A. Conceptualising sustainability as a safe and just space for humanity

As societal concerns about global changes grow, so too have interdisciplinary efforts to provide global-scale perspectives on sustainability.[10] For over a decade, we have worked with the planetary

nt/869807/EGD_brochure_EN.pdf> accessed 14 August 2024; and the use of Earth system changes as a key motivation for the strategic economic vision set out in EC (2018) Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee, the Committee of the Regions and the European Investment Bank, 'A Clean Planet for all – A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy', COM/2018/773 final.

[10]RW Kates, 'Sustainability Science' in D Richardson, N Castree, MF Goodchild, A Kobayashi, W Liu and RA Marston (eds), *International Encyclopedia of Geography* (John Wiley & Sons Ltd 2016); WC Clark et al, 'Science and Policy for Sustainable Development' 47 (2005) Environment Cover 2; R Kates, 'What Kind of a Science Is Sustainability Science?' 108 (2011) Proceedings of the National Academy of Sciences 19449.

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boundaries framework,[11] an influential initiative[12] that diagnoses the world's departure from a biophysically characterised 'safe operating space for humanity'. Threats have long been recognised to both the 'inner limits' of basic human needs and the 'outer limits' of the planet's environmental integrity.[13] Raworth[14] coined the 'safe and just space', demonstrating today's severe sustainability shortfalls by combining planetary boundaries with social foundations based on internationally agreed minimum social requirements. Raworth's inclusion of social foundations also permits a diagnostic analysis of key aspects of unsustainability. This visually simple yet conceptually powerful approach characterises an environmentally safe and socially just space where societies can seek opportunities to thrive (Figure 1).

We work with this safe and just framework for sustainability for several reasons. It is highly salient to today's agendas, helping its users hold the world's most pressing interdependent sustainability challenges in mind at the same time. Its global perspective complements existing local and sectoral approaches for sustainability assessment and action. Its biophysical and social dimensions are underpinned with multidisciplinary research and worldwide data,[15] conferring scientific credibility and political legitimacy, and pointing decision-makers to a robust evidence base that can support sustainability action across geographic scales and governance levels. And there is now considerable experience in translating this framework into action contexts.[16]

However, recent academic publications reveal interpretive flexibility about 'planetary boundaries',[17] which unfortunately aggravates fuzzy conceptualisations and mixed messages even within contributory research.[18] We are concerned that in these publications, an uncritically teleological interpretation is being imposed on the diagnostic framework. We see serious risks arising when the framework's individual boundaries are treated as planet-management goals. Powerful and influential initiatives, such as the self-styled Global Commons Alliance[19] discussed further below, are promoting the use of this small set of quantified indicators of global change, in ways that become disconnected from the systemic understanding provided by the underpinning science and the reflexive practices of sustainability research. So we must first set out here the basic premises informing our inter- and transdisciplinary use of this concept.

Earth system science underpins the planetary boundaries framework, conferring it with considerable authority.[20] Earth system analysis characterises the interconnections of life and its

[11]J Rockström et al, 'A Safe Operating Space for Humanity' 461 (2009) Nature 472.

[12]AS Downing et al, 'Matching Scope, Purpose and Uses of Planetary Boundaries Science' 14 (2019) Environmental Research Letters 073005.

[13]UNEP/UNCTAD, 'The Cocoyoc Declaration: Adopted by the Participants in the UNEP/UNCTAD Symposium on "Patterns of Resource Use, Environment and Development Strategies"', Cocoyoc, Mexico, 8–12 October, 1974.

[14]K Raworth, 'A Safe and Just Space for Humanity: Can We Live Within the Doughnut' [2012] Oxfam Discussion Papers; K Raworth, *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist* (Chelsea Green Publishing 2017).

[15]SE Cornell and AS Downing, 'Environment, Absolute? The Quality Infrastructure of the Planetary Boundaries. Stockholm Resilience Centre Discussion Paper for Germany's Physikalisch-Technische Bundesanstalt' (2014) Stockholm Resilience Centre; Raworth, *Doughnut Economics* (n 14).

[16]European Environment Agency and the Swiss Federal Office for the Environment, 'Is Europe Living within the Limits of Our Planet? An Assessment of Europe's Environmental Footprints in Relation to Planetary Boundaries' (2020) Joint EEA/FOEN Report EEA 01/2020; DEAL, 'Doughnut Economics Action Lab – Discover the Community' (n.d.) <https://doughnuteconomics.org/discover-the-community> accessed 2 January 2024; eg X Bai et al, 'Translating Earth System Boundaries for Cities and Businesses' 7 (2024) Nature Sustainability 108–19.

[17]J Rockström et al, 'Safe and Just Earth System Boundaries' 619 (2023) Nature 102; U Brand et al, 'From Planetary to Societal Boundaries: An Argument for Collectively Defined Self-Limitation' 17 (2021) Sustainability: Science, Practice and Policy 264.

[18]F Biermann and RE Kim, 'The Boundaries of the Planetary Boundary Framework: A Critical Appraisal of Approaches to Define a "Safe Operating Space" for Humanity' 45 (2020) Annual Review of Environment and Resources 497.

[19]Global Commons Alliance <https://globalcommonsalliance.org/components> accessed 14 August 2024.

[20]E Lövbrand et al, 'Earth System Governmentality' 19 (2009) Global Environmental Change 7; M Heymann and A Dahan Dalmedico, 'Epistemology and Politics in Earth System Modeling: Historical Perspectives' 11 (2019) Journal of Advances in Modeling Earth Systems 1139.

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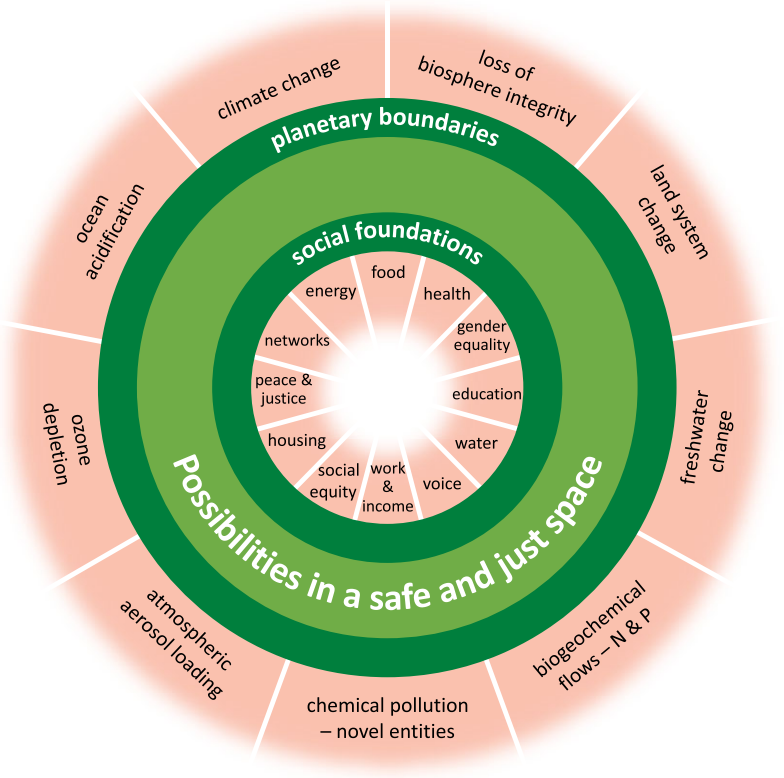

Figure 1. A safe and just space for humanity entails mitigating pressures on biophysical planetary boundaries and securing social foundations. The greater the departure from this space (shown as red shading), the greater the risks and harms of unsustainability. Adapted from Raworth (2017), Leach et al (2013).

physical and geochemical environment – the 'workings' of planet Earth, which here we term biophysical processes. These interactions shape planetary flows of matter and energy (manifest as climate), which in turn shape conditions for life (termed biosphere integrity in the framework).[21] The *variability* of Earth's behaviour arises from combinations of the internal dynamics ('feedbacks') and driving forces from outside the coupled climate-life system ('forcings'), such as major volcanic eruptions, changes in Earth's positioning relative to the sun – and the anthropogenic introduction of fossil-fuelled greenhouse gases. The *stability* of Earth's climate and ecosystems is fundamentally governed by physical and chemical properties of land, water, ice and the atmosphere, and by the capacity of living organisms to exploit, respond and adapt to those conditions. A key insight from the field of resilience science is that Earth's stability is a dynamic outcome of the behaviour of complex adaptive living systems[22] – and that the resilience of Earth's ecosystems, of which human beings are part, can be eroded to the point of destabilisation and abrupt reorganisation.[23] Thus, planetary boundaries are not static limits, carrying capacities, or resource constraint or allocation budgets, although they are often viewed interchangeably with

[21]SH Schneider and R Londer, *The Coevolution of Climate and Life* (Sierra Club Books 1984); SE Cornell et al, *Understanding the Earth System: Global Change Science for Application* (Cambridge University Press 2012).

[22]CS Holling, 'Resilience and Stability of Ecological Systems' 4 (1973) Annual Review of Ecology and Systematics 1.

[23]JA Dearing et al, 'Safe and Just Operating Spaces for Regional Social-Ecological Systems' 28 (2014) Global Environmental Change 227.

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these precedent concepts[24]; and their tools and metrics are often used in operationalisation of the planetary boundaries framework.[25]

It can work as a scientifically coherent framework because the comparatively stable conditions of the ~12,000-year Holocene epoch provide a well-characterised conceptual baseline for the set of processes included in the framework.[26] While Earth's environment has varied greatly over geological time, it is mainly in the Holocene that human societies established themselves worldwide, hence the normative judgement that planetary boundaries together demarcate a 'safe' space for humanity. Evidence of the variability of Earth's behaviour from deeper geological time provides additional understanding of the possible pace, abruptness and interconnectivity of large-scale Earth system changes.[27] Today, the nine human-driven global change processes are shifting the world away from both biophysical stability and scientific predictability (Table 1). The framework's 'core boundaries', climate change and biodiversity loss, characterise Earth's epochal climatic and ecological conditions; breaching these boundaries irreversibly alters the trajectory of Earth system dynamics.[28] The other processes in the framework capture the most consequential aspects of natural resource use and the synthesis and mobilisation of pollutants. Major changes in any one process cascade through the others, altering biophysical feedbacks and affecting how ecosystems reconfigure themselves to adapt to climate conditions.[29]

The planetary boundaries framework's relevance to sustainability decision-making is its clear message that societal risks rise when biophysical boundaries are breached – as most already are. Perturbing multiple processes intensifies systemic shifts from well-characterised conditions to increasingly turbulent, poorly predictable dynamics.[30] The greater (and faster) the human-caused disruptions, the more likely that hazards will materialise not only locally but also elsewhere in the globalised system,[31] aggravating and perhaps perpetuating structural, socioeconomic and intergenerational injustice.

In this dynamic and interconnected context, sustainability involves dealing justly with today's unsafe conditions, and dealing safely with unjust conditions. A 'safe and just space' is not a natural biophysical state of the planet which merely needs to be quantified and managed. Nor is it a social condition that can be achieved through scientifically optimised planetary allocation of resources, risks and benefits. And in this context, we are concerned at the ways that particularly reductive strands of physical environmental science are encroaching into the territory of justice scholarship.

[24]CD Butler, 'Limits to Growth, Planetary Boundaries, and Planetary Health' 25 (2017) Current Opinion in Environmental Sustainability 59.

[25]A Bjørn et al, 'Strengthening the Link between Life Cycle Assessment and Indicators for Absolute Sustainability to Support Development within Planetary Boundaries' 49 (2015) Environmental Science & Technology 6370; A Bjørn et al, 'Is Earth Recognized as a Finite System in Corporate Responsibility Reporting?' 163 (2017) Journal of Cleaner Production 106; DW O'Neill et al, 'A Good Life for All within Planetary Boundaries' 1 (2018) Nature Sustainability 88.

[26]E Jansen et al, 'Palaeoclimate' in S Solomon et al (eds), *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge University Press 2007).

[27]V Brovkin et al, 'Past Abrupt Changes, Tipping Points and Cascading Impacts in the Earth System' 14 (2021) Nature Geoscience 550; B Shuman, 'Patterns, Processes, and Impacts of Abrupt Climate Change in a Warm World: The Past 11,700 Years' 3 (2012) WIREs Climate Change 19.

[28]Schneider and Londer (n 21); W Steffen et al, 'Planetary Boundaries: Guiding Human Development on a Changing Planet' 347 (2015) Science 1259855.

[29]G Jia et al, 'Land-Climate Interactions' in PR Shukla et al (eds), *Climate Change and Land: an IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems* (Intergovernmental Panel on Climate Change 2019).

[30]W Steffen et al, 'Trajectories of the Earth System in the Anthropocene' 115 (2018) Proceedings of the National Academy of Sciences 8252.

[31]IPCC, 'Summary for Policymakers' in PR Shukla et al (eds), *Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems* (Cambridge University Press 2019).

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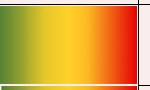
Table 1. Trends and status of the nine human-changed global biophysical processes in the planetary boundaries framework[32]

Trend	Planetary boundary process and metric of control variable	Boundary level and current level	Rising risk →	Selected Multilateral Environmental Agreements
↑	**Climate change** *carbon dioxide concentration*	**350** ppm **420** ppm		UN Framework Convention on Climate Change
↑	**Loss of biosphere integrity** *species extinction rate*	<**10** E/MSY >>**100** E/MSY		Convention on Biological Diversity
↑	**Land system change** *forested area*	**75**% intact forest **60**% intact forest		Convention to Combat Desertification
↑	**Altered N & P flows** *human-mobilised flow per year*	**62** Tg N, **11** Tg P **190** Tg N, **23** Tg P		Convention on Long-Range Transboundary Air Pollution
↑	**Release of novel entities** *impact pathway indicators*	Some entities have **'No safe level'**		Stockholm, Basel and Rotterdam Conventions
↑	**Freshwater change** *water volume used per year*	**10%** disturbed-flow area **18%** disturbed-flow area Soil water **over-used**		Water Convention
↑	**Ocean acidification** *carbonate saturation in seawater*	>**80**% $\Omega_{pre\text{-}indust}$ ~**81**% $\Omega_{pre\text{-}indust}$		Partly covered under Climate Convention
≈	**Atmospheric aerosol loading** *aerosol optical depth*	**0.1** interhemispheric difference in AOD ~**0.08** IHD in AOD		Convention on Long-Range Transboundary Air Pollution
↘	**Stratospheric ozone depletion** *ozone concentration*	**290** ± 5% DU (Antarctica <**200** DU)		Montreal Protocol of the Vienna Convention

Summary overview of assessments by Steffen et al 2015, Persson et al 2022, Wang-Erlandsson et al 2022, and Richardson et al 2023. Six planetary boundaries are assessed as overstepped and severe impacts are already well documented. Trends are currently worsening for most of the boundaries. The boundaries are defined against a relatively stable long-term global baseline of Holocene conditions (represented as green shading). Predictability decreases and risks to society rise as the world oversteps these boundaries and departs from resilient and well-characterised Earth system conditions (intensifying red shading). International law recognizes all the processes as issues requiring large-scale and multilateral responses; indicative examples are given in the last column.

For example, the coalitions of global change science networks, wealthy philanthropists, strategic sustainability think tanks and campaign organisations, and business actors making up the 'Global Commons Alliance' are defining, promoting and creating tracking systems for a particular set of social and technological 'key transformations'. Key components in this constellation are the so-called 'Earth Commission' selected from self-nominees in the international global change science community to 'define limits' for 'shared resources that are essential for a habitable planet'[33]; and the 'Science-Based

[32]Steffen et al (n 28); L Persson et al, 'Outside the Safe Operating Space of the Planetary Boundary for Novel Entities' 56 (2022) Environmental Science & Technology 1510; L Wang-Erlandsson et al, 'A Planetary Boundary for Green Water' 3 (2022) Nature Reviews Earth & Environment 380–2; K Richardson et al, 'Earth beyond Six of Nine Planetary Boundaries' 9 (2023) Science Advances eadh2458.

[33]Earth Commission <https://earthcommission.org/> accessed 12 August 2024.

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Targets Network',[34] which is modelled on the highly influential Science-Based Targets Initiative[35] for setting and disclosing corporate climate targets, with several actors and organisations in common. For full disclosure, one of us (Cornell) has been involved in earlier phases of these initiatives, opting to end that involvement because of growing misalignment with her own long-standing commitments to transdisciplinary critique and integrative methodology across natural and social sciences.[36]

The situation today is that a very small subset of scientists assesses what is 'safe', honing in on climate target-setting to reduce carbon emissions. In turn, this informs the prevailing understanding of sustainability risks, which explains why so many aspects of today's extreme unsustainabilities are not recognised.[37] The dominant climate-centric emphasis has direct implications for policy,[38] with the science–business–policy interface presenting 'science-based' solutions that are paradoxically counterproductive, as we discuss below.

These initiatives are also disregarding social research insights. Just as most biophysical planetary boundaries are overstepped, there are shortfalls on most social dimensions – which also both reflect and present unsafe and unjust conditions for many people, despite internationally agreed sustainability priorities. Raworth's inclusion of social foundations in the safe and just framework[39] are underpinned with consensus in UN deliberations and adoption of Sustainable Development Goals,[40] conferring political and societal legitimacy to the framework. They are also supported in international law including human rights, labour, taxation and anti-corruption law, albeit to varying and consistently insufficient extents.[41]

Safeguarding and sustaining a safe and just space require continual negotiation and intentional transitions, informed by research and real-world knowledge about the interconnected complexities of Earth's social-ecological systems. We argue that the proper role of global sustainability science is less about imposing static, simplistic 'science-based' metrics with tenuous links to the establishment of stable future conditions (because complex Earth system changes cannot simply be reversed) and more about exposing *'questions of justice and inequality relating to global patterns of consumption and production, resource allocation, benefit distribution, and so on'*.[42]

[34]Science Based Targets Network <https://sciencebasedtargetsnetwork.org/> accessed 12 August 2024.

[35]Science Based Targets <https://sciencebasedtargets.org/> accessed 12 August 2024.

[36]SE Cornell, 'Climate Change: Brokering Interdisciplinarity Across the Physical and Social Sciences', in R Bhaskar et al (eds), *'Interdisciplinarity and Climate Change: Transforming Knowledge and Practice for Our Global Future* (Routledge 2010) 116–34.

[37]A Bjørn et al, 'Can Science-Based Targets Make the Private Sector Paris-Aligned? A Review of the Emerging Evidence' 8 (2022) Current Climate Change Reports 53; J Giesekam et al, 'Science-Based Targets: On Target?' 13 (2021) Sustainability 1657; J Walenta, 'Climate Risk Assessments and Science-based Targets: A Review of Emerging Private Sector Climate Action Tools' 11 (2020) WIREs Climate Change e628.

[38]M Hulme, *Climate Change Isn't Everything: Liberating Climate Politics from Alarmism* (Polity Press 2023); JP Tilsted et al, 'Corporate Climate Futures in the Making: Why We Need Research on the Politics of Science-Based Targets' 103 (2023) Energy Research & Social Science 103229.

[39]K Raworth, 'A Safe and Just Space for Humanity: Can We Live within the Doughnut' (2012) Oxfam Discussion Papers <https://www-cdn.oxfam.org/s3fs-public/file_attachments/dp-a-safe-and-just-space-for-humanity-130212-en_5.pdf> accessed 6 August 2024; Raworth, *Doughnut Economics* (n 14).

[40]UN, *Transforming Our World: The 2030 Agenda for Sustainable Development* (United Nations 2015) A/RES/70/1.

[41]Eg, T Novitz and C Gammage, 'Report on International Regulatory Complexity of EU Trade and Investment – Mapping and Analysis: Analysis of International and EU Law for Trade and Investment Flows between the EU and Other Countries of Various Levels of Development' (2017) SMART Report <https://www.smart.uio.no/resources/reports/d2.2-smart-report-on-international-complexity.pdf> accessed 14 August 2024; Raworth, *Doughnut Economics* (n 14); MB Taylor and M van der Velden, 'Resistance to Regulation: Failing Sustainability in Product Lifecycles' 11 (2019) Sustainability 6526.

[42]LJ Kotzé and RE Kim, 'Earth System Law: The Juridical Dimensions of Earth System Governance' 1 (2019) Earth System Governance 100003.

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B. An expanded research base for the 'safe and just space' is needed

Globally coordinated environmental change science has long been an influential actor in international law that responds to the biophysical issues flagged in the planetary boundaries' framework, as evidenced in the multilateral environmental agreement examples shown in Table 1. Recent agreements include the Kunming-Montreal Global Biodiversity Framework to guide action to 2030 for implementing the Convention on Biological Diversity, and the UN High Seas Treaty extending the protection of marine nature. Ongoing developments include negotiations for a UN Plastics Treaty. All explicitly emphasise the role of science, continuing what some scholars regard as a shift from instrumental 'science in action' to 'science for action'.[43]

Despite this emphasis, the international law framework has major gaps between scientific issue-recognition and actual action to mitigate environmental changes and reduce associated risks. For some issues, these are law and policy gaps. For example, for nitrogen and phosphorus flows, the global problem is only partially covered by regional agreements[44] and sectoral instruments deal piecemeal with different environmental compartments (eg, air quality, wastewater management, agriculture and spatial planning). More often, the challenge is an implementation gap. For climate change, biodiversity loss and chemical pollution, global-scale multilateral agreements are in place, with well-specified and scientifically informed objectives, precisely defined targets and quantified metrics (Table 1). And yet there is a lack of legal bindingness and persistent enforcement failures, so problematic trendlines continue and agreed policy goals are repeatedly deferred or redefined.[45]

The strong influence of (environmental) science in global environmental law may be contrasted to international law's governance of social foundations, where there is no similarly powerful global coordination of academic actors. Human rights law and international labour law are (historically) more informed by civil society than by the scholarly community.[46] Raworth emphasises that the minimum requirement for securing social foundations in the safe and just operating space entails ensuring the realisation of basic human rights,[47] as set out in the Universal Declaration of Human Rights.[48] According to Samuel Moyn, this milestone document *'did more than simply enshrine the ideal of distributive sufficiency that the declaration explicitly defined in its series of basic entitlements; it also reflected the ambitious political enterprise of distributive equality'*.[49] However, distributive equality is not widely implemented as an intrinsic element of social justice, and socio-economic rights have remained in the shadow of civil and political rights. Raworth's work may thus be seen as a criticism of the human rights movement.[50] Social justice concerns are also

[43]S Jasanoff, 'Serviceable Truths: Science for Action in Law and Policy' 93 (2015) Texas Law Review 1723; JG Laitos, 'How Science Has Influenced, but Should Now Determine, Environmental Policy' 43 (2019) William & Mary Environmental Law and Policy Review 759; JW Moore et al, 'Towards Linking Environmental Law and Science' 3 (2018) FACETS 375.

[44]Ahlström and Cornell (n 8).

[45]CBD Secretariat, *Global Biodiversity Outlook 5* (Secretariat of the Convention on Biological Diversity 2020) <https://www.cbd.int/gbo5> accessed 4 June 2022; UNEP, *Costs of Inaction on the Sound Management of Chemicals* (United Nations Environment Programme 2013) <https://wedocs.unep.org/xmlui/handle/20.500.11822/8412> accessed 7 November 2022; UNEP, *Emissions Gap Report 2021: The Heat Is On – A World of Climate* (United Nations Environment Programme (UNEP) and UNEP DTU Partnership 2021) <http://www.unep.org/resources/emissions-gap-report-2021> accessed 4 June 2022; UNEP, *Emissions Gap Report 2023: Broken Record – Temperatures Hit New Highs, yet World Fails to Cut Emissions (Again)* (United Nations Environment Programme 2023) <https://wedocs.unep.org/20.500.11822/43922> accessed 3 January 2024.

[46]Eg, F Viljoen, 'International Human Rights Law: A Short History' 46 (2012) UN Chronicle 8.

[47]Raworth, 'A Safe and Just Space for Humanity: Can We Live within the Doughnut' (n 14).

[48]UN, *Universal Declaration of Human Rights* (United Nations 1948).

[49]S Moyn, *Not Enough: Human Rights in an Unequal World* (The Belknap Press of Harvard University Press 2018) 13–14.

[50]LM Collins, 'Sustainable Development Goals and Human Rights: Challenges and Opportunities' in D French and LJ Kotzé (eds), *Sustainable Development Goals: Law, Theory and Implementation* (Edward Elgar 2018); LJ Kotzé, 'The Anthropocene, Earth System Vulnerability and Socio-Ecological Injustice in an Age of Human Rights' 10 (2019) Journal of Human Rights and the Environment 62, 73–5.

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entwined with ecological dimensions.[51] This calls for an analysis that addresses the *'causally interdependent structural causes of socio-ecological justice globally'*, and that is *'more inclusive and attentive, refusing to shut out complexities and connections that might otherwise go unaccounted for'*.[52]

Research-based responses to the sustainability challenge involve understanding that we, the peoples of the world, are all vulnerable to global changes but not all equally exposed nor equally resilient. Risks and opportunities alike are in flux, and they cannot be steered through simplistic global-level quantifications.[53] Achieving sustainability *'requires exploration of and debate about which combinations of pathways to pursue at different scales'*, in a process that needs to be *'as open and inclusive as possible, giving voice to the knowledge, values and priorities of women and men who are marginalised, so that they are able to challenge powerful groups and interests'*.[54] As Oomen, Hoffman and Hajer discuss, the politics of the future indeed depend on whose imagined futures are constituted in the forums that matter.[55]

C. Global sustainability goals fall short of a research-based understanding of sustainability

International law has not managed to establish a global regulatory framework to achieve a safe and just space, yet international policy support for sustainability is clear and other kinds of regulatory initiatives, broadly understood, are being employed. Key amongst these is the 2030 Agenda for Sustainable Development, which can be seen as giving ways to structure coordinated international responses to the global risks of unsustainability.

The 2030 Agenda opens with a clear statement that aligns with mitigating biophysical pressures and securing social foundations of the safe and just space:

> *We resolve, between now and 2030, to end poverty and hunger everywhere; to combat inequalities within and among countries; to build peaceful, just and inclusive societies; to protect human rights and promote gender equality and the empowerment of women and girls; and to ensure the lasting protection of the planet and its natural resources.*[56]

The SDGs may be perceived as a useful starting point for businesses wanting to assess risks and impacts of their activities, but despite the 2030 Agenda's assertion that its Goals are '*integrated and indivisible*',[57] it is very unclear about the connections between goals (both in the texts and the targets; thus both in the spirit and substance of the SDGs). Treating the SDGs as a sustainability checklist presents problematic trade-off situations,[58] where a short-term focus means risks of continued unsustainability remain high.

The SDGs encompass all biophysical issues highlighted in the planetary boundaries framework, to some extent (Figure 2). SDGs 13, 14 and 15 tackle climate change and biodiversity loss. Water is

[51]F Berkes, J Colding and C Folke (eds), *Navigating Social-Ecological Systems: Building Resilience for Complexity and Change* (Cambridge University Press 2002).

[52]Kotzé and Kim (n 42) 77.

[53]J Ensor and E Hoddy, 'Securing the Social Foundation: A Rights-Based Approach to Planetary Boundaries' 7 (2020) Earth System Governance 100086.

[54]M Leach et al, 'Between Social and Planetary Boundaries: Navigating Pathways in the Safe and Just Space for Humanity' in International Social Science Council (ISSC) and UNESCO (eds), *World Social Science Report 2013* (OECD Publishing 2013) <https://steps-centre.org/blog/wssr/> accessed 22 November 2020, 88.

[55]J Oomen, J Hoffman and MA Hajer, 'Techniques of Futuring: On How Imagined Futures Become Socially Performative' (2022) 25 European Journal of Social Theory 252.

[56]UN, '*Transforming Our World*' (n 40) Introduction para 3.

[57]Ibid., preamble.

[58]M Pedercini et al, 'Harvesting Synergy from Sustainable Development Goal Interactions' 116 (2019) Proceedings of the National Academy of Sciences of the United States of America 23021; HL van Soest et al, 'Analysing Interactions among Sustainable Development Goals with Integrated Assessment Models' 1 (2019) Global Transitions 210.

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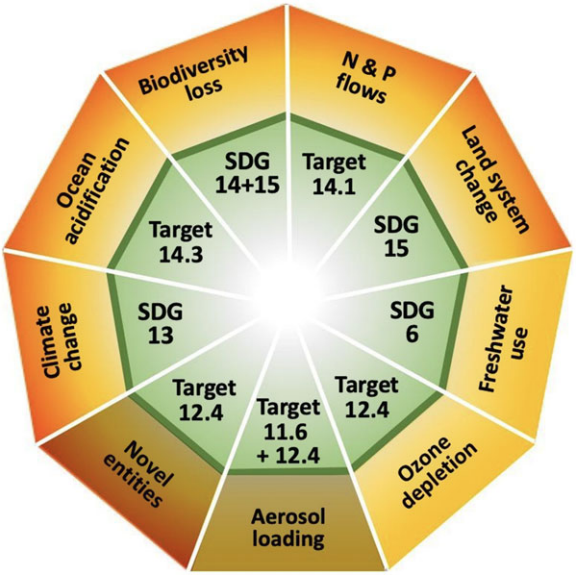

Figure 2. The 2030 Agenda addresses all nine environmental priorities in the planetary boundaries' framework. Climate change, biodiversity loss, land systems and water used are the focus of Goals. The other processes are included in Targets under other goals. (Figure: Sarah Cornell).

the focus of SDG6, and several SDG targets relate directly to other biophysical processes. Similarly, the economic goals SDG 8 and SDG 12 acknowledge the importance of maintaining Earth's natural resources and avoiding environmental degradation, creating strong interdependencies with SDGs 6, 13, 14 and 15. However, the SDGs fall short of responding sufficiently to these planetary pressures. A fragmentary approach to achieving the desired near-term gains could undermine long-term ecological resilience.[59] Because the 2030 Agenda does not recognize that continued stable functioning of the living environment forms the basis for achievement of all other goals, the economic SDGs do not acknowledge any constraints on Earth's regenerative capacity. For instance, SDG 8 leaves the decoupling of economic growth from environmental degradation as an aspiration for countries' endeavours, and it assumes that such decoupling is indeed globally possible.

The social aspects of the SDGs inform the selection of social foundations in the safe and just framework and yet they are insufficient. Implementing the social targets of Agenda 2030 requires going beyond some international treaty obligations, while other international obligations are not adequately encompassed by the SDGs. Notably, operating in a safe and just space should be interpreted as including wider international obligations towards Indigenous Peoples, with their concomitant environmental relations.[60]

In this regulatory space, where states and international institutions have not been able to achieve overarching sustainability goals, the science–business–policy interface has become very important. However, several interlinked problems arise.

While science has informed conceptualisation and contributes importantly to the basis for governing towards global sustainability, a very narrow segment of science dominates today's discussions of how to facilitate sustainable business.

Political choices made at the global level take the world's societies along different development pathways, raising challenging questions about the transparency, accountability and legitimacy of

[59]SZ Dobrowski et al, 'Protected-Area Targets Could Be Undermined by Climate Change-Driven Shifts in Ecoregions and Biomes' 2 (2021) Communications Earth & Environment 198.

[60]S Díaz et al, 'The IPBES Conceptual Framework – Connecting Nature and People' 14 (2015) Current Opinion in Environmental Sustainability 1; PO'B Lyver and JM Tylianakis, 'Indigenous Peoples: Conservation Paradox' 357 (2017) Science 142; MN Tom et al, 'Indigenous Knowledges as Vital Contributions to Sustainability' 65 (2019) International Review of Education 1.

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decisions and institutions – at all levels. Setting global goals and limits necessarily involves consideration of allocation principles and implementation options.[61] In prominent science-business interactions, these political aspects tend to be bypassed through the quantitative emphasis that prioritises (quantifiable) physical climate and a technologically enabled pathway to a decarbonised future. When ways forward are conceptualised from a biophysically narrow and socially universalising perspective, the diversity of perspectives and opportunities is suppressed, and there is a danger that the most marginalised and vulnerable groups remain insufficiently included in decision-making processes.[62]

3. What is business up to?

A. A 'safe and just' understanding of corporate sustainability

'Corporate sustainability' is a term that is intended to encompass the contribution of business to sustainability.[63] Our conceptualisation of corporate sustainability for a safe and just world embeds these core elements: business that supports the long-term environmental resilience of Earth's ecosystems, on which humanity and all other living beings depend, and that secures the economic, governance and social bases of good lives for people and of well-functioning societies. This stands in stark contrast to the dominant so-called 'weak' understanding of corporate sustainability, where economic value, social welfare and the natural environment are seen as substitutable.[64] It also contrasts starkly with today's aggregate reality of business as usual, which is contributing to environmental destruction, the exploitation of people and the undermining of the economic and governance bases for well-functioning societies.

This 'safe and just' understanding of corporate sustainability is the basis for our engagement with two key concepts in the discourses on governance and regulation of business for sustainability. We first discuss *sustainable value*, an emerging concept in the influential area of corporate governance. It is connected to and can be seen as the positive flipside of the second key concept that we discuss further below: *sustainability risks*.

B. The insufficiency of 'sustainable value creation'

Why is business in aggregate still contributing to the extreme unsustainabilities of our time? Multijurisdictional comparative company law analyses show that business is part of a market-driven, financialised system that prioritises near-term maximisation of returns to investors. The social norm of *shareholder primacy*, a short form for the complex mix of market signals and economic incentives prioritising shareholder interests in value creation, is a main barrier to more sustainable business.[65] It constrains the possibility for the board and by extension senior executive management to shift businesses onto more sustainable paths. Competing social norms, such as the OECD Guidelines for Multinational Enterprises on Responsible Business Conduct of 1976, and

[61]M Blomfield, 'Global Common Resources and the Just Distribution of Emission Shares' 21 (2013) Journal of Political Philosophy 283.

[62]Collins (n 50); D Weissbrodt and M Rumsey (eds), *Vulnerable and Marginalised Groups and Human Rights* (Edward Elgar 2011).

[63]A Rasche et al (eds), *Corporate Sustainability: Managing Responsible Business in a Globalised World* (2nd edn, Cambridge University Press 2023).

[64]S Sagen Vildåsen et al, 'Clarifying the Epistemology of Corporate Sustainability' 138 (2017) Ecological Economics 40.

[65]CM Bruner and B Sjåfjell, 'Corporate Law, Corporate Governance and the Pursuit of Sustainability' in B Sjåfjell and CM Bruner (eds), *The Cambridge Handbook of Corporate Law, Corporate Governance and Sustainability* (Cambridge University Press 2019) 713–20; B Sjåfjell et al, 'Shareholder Primacy: The Main Barrier to Sustainable Companies' in B Sjåfjell and BJ Richardson (eds), *Company Law and Sustainability: Legal Barriers and Opportunities* (Cambridge University Press 2015) 79–147; LA Stout, *The Shareholder Value Myth: How Putting Shareholders First Harms Investors, Corporations, and the Public* (Berrett-Koehler Publishers 2012).

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the UN Guiding Principles of Business and Human Rights of 2011, have so far been insufficient to fundamentally shift these unsustainable dynamics,[66] although there are interesting regulatory developments, which we discuss in Section 4.B.

Perceptions of the role of business in society are changing, presenting possibilities for ensuring that business contributes to the transformation to sustainability. Indicative of this change is the emerging concept of *sustainable value creation*. Recent reforms of corporate governance codes in Europe have included this terminology, possibly signalling a shift away from the focus on shareholder primacy, which many of the codes have been informed by and supported. However, the treatment in the codes of sustainable value creation is relatively superficial, and still constrained by shareholder-primacy ways of thinking.[67] Also, there is no academic consensus on the definition of sustainable value, and the concept is poorly understood in management theory.[68]

In this landscape, the risk is that the ubiquitous references by business to 'sustainable value'[69] are without any meaningful basis, let alone a research-based understanding of sustainability. This allows businesses to claim that they are creating sustainable value (whether by using the terminology or through other forms of 'green claims') while continuing with unsustainable business as usual.[70] Business attempts to set or narrow down the defining terms of 'sustainable value', for instance, by concentrating mainly on climate action,[71] increase the risk that the concept becomes a hollow term or a device for deflecting attention from continued unsustainable practices.

In contrast, positioning sustainable value creation within a research-based concept of sustainability opens up space for wider societal discussion about what sustainable business entails, and it could give corporate decision-makers a new mandate and a firmer regulatory framework for sustainable corporate governance.

We see sustainable value creation as a dynamic concept: it is the process by which business can operationalise corporate sustainability. Our starting point is accordingly that sustainable value entails economic value for business and for society that is created in ways that are sustainable. For us, this

[66]B Sjåfjell and MB Taylor, 'Clash of Norms: Shareholder Primacy vs. Sustainable Corporate Purpose' 13 (2019) International and Comparative Corporate Law Journal 40; C Villiers, 'Global Supply Chains and Sustainability: The Role of Disclosure and Due Diligence Regulation' in B Sjåfjell and CM Bruner (eds), *The Cambridge Handbook of Corporate Law, Corporate Governance and Sustainability* (Cambridge University Press 2019) 551–5.

[67]HS Birkmose, 'On the Road to Corporate Sustainability in Denmark?' in B Sjåfjell and J Mähönen (eds), *Nordic Company Law: Broadening the Horizon* (Scandinavian University Press 2023); B Sjåfjell and G Tsagas, 'Integrating Sustainable Value Creation in Corporate Governance: Company Law, Corporate Governance Codes and the Constitution of the Company' in B Sjåfjell et al (eds), *Sustainable Value Creation in the EU: Towards Pathways to a Sustainable Future through Crises* (Cambridge University Press 2023) Ch. 9.

[68]F Lüdeke-Freund et al, 'Sustainable Value Creation Through Business Models: The What, the Who and the How' 8 (2020) Journal of Business Models 62.

[69]Illustrative are the many references to 'sustainable value' in 'partner content' and company announcements in Financial Times, see eg Financial Times, 'PepsiCo Europe and Yara partner to decarbonize crop production', *Financial Times* (16 July 2024), <https://markets.ft.com/data/announce/detail?dockey=1330-1000971706en-39ELVHU1KR4V8CALRGQT3DGN7R> accessed 9 August 2024, and the multiple funds with 'sustainable value' in their names, see Financial Times, 'Funds Results' *Financial Times* <https://markets.ft.com/data/search?assetClass=Fund&query=sustainable+value> accessed 14 August 2024.

[70]J McGuinn et al, 'Environmental Claims in the EU: Inventory and Reliability Assessment' (2020) Publications Office of the European Union <https://circabc.europa.eu/ui/group/44278090-3fae-4515-bcc2-44fd57c1d0d1/library/b11ba10b-5049-4564-b47a-51a9bc9003c8/details?download=true> accessed 14 August 2024; UNEP and UNFCCC, *The Sustainable Fashion Communication Playbook* (UNEP and UNFCCC 2023) <https://doi.org/10.59117/20.500.11822/42819> accessed 14 August 2024.

[71]S Varley, 'How can slowing climate change accelerate your financial performance?' *Climate Action* (14 November 2022). <https://www.climateaction.org/news/how-can-slowing-climate-change-accelerate-your-financial-performance> accessed 15 November 2024. The 2023 EY Sustainable Value Study even indicates that this limited approach to sustainable value is 'losing momentum', stating that the 'median target year for achieving climate ambitions is now 2050, compared with 2036 in the previous year's study', EY, *How Can Boards Convert Sustainability from a Wish to a Winning Reality?* (EY 2024) <https://www.ey.com/en_uk/long-term-value/europe-corporate-governance-survey-findings> accessed 9 August 2024.

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means contributing to ensuring the resilience of the planetary ecosystems of which humanity is part and to securing social foundations. Every element of this starting point calls for elaboration and discussions of key concepts such as 'value'.[72] However, our intention in the short elaborations below is to contrast with 'business as usual' and to inform our further analysis.

Translated into the governance of business, contributing to long-term environmental resilience entails recognising the existence and complexity of ecological limits. It entails seeking to respond adaptively to changing hazards and working to mitigate pressures on planetary boundaries, as far as relevant and possible, depending on the sector, the size of the business and the possibilities for coordinated efforts. Sustainable value creation entails moving towards more sustainable, more circular models.[73] Yet business as usual is based on a competitive race to extract as much economic value from 'natural resources' as possible, thus 'externalising' the resulting harms of depletion of the same 'resources', pollution, ecosystem destruction and the changing of Earth's climate, and undermining the ecological basis for a safe and just space. The impacts of today's unsustainable linear business models are often displaced to communities far away.

Contributing to securing social foundations encompasses ensuring fair treatment, a 'living wage' and safe working conditions of employees as well as of workers and local communities across global value chains. Respect for international human rights and core conventions of the International Labour Organisation (ILO) is a minimum. Business governance for sustainable value creation includes open and inclusive participatory processes, resisting the *'commodification of labour by seeking to revitalise the voice of everyone, regardless of the types of work they do or how they are hired'*.[74] This is as relevant for workers employed by large businesses as it is for small- and medium-sized enterprises (SMEs). It is also in stark contrast with how business in aggregate currently operates. Extreme exploitation of people working in slavery-like conditions is a business norm, both within Europe and across the global value chains of European businesses. Business as usual is also complicit in the connection between environmental destruction and exploitation of people,[75] where Indigenous Peoples and (other) local communities are particularly vulnerable to being 'invisibilised' workers.[76]

Sustainable value creation contributes to the economic basis of the societies in which the business interacts and precludes so-called aggressive tax planning and outright evasion.[77] Further, creating sustainable value entails support for democratic political processes,[78] including those that change the regulatory framework for businesses. This requires a shift away from business as usual, where intensive corporate lobbying and various forms of corporate capture of regulatory processes currently delay and derail transformation towards sustainability (we discuss examples in Section 4.B).

[72]Eg, S Jakub et al, 'Economic Value Added as a Measurement Tool of Financial Performance' 26 (2015) Procedia Economics and Finance 484; E Kassem et al, 'Sustainability Assessment Using Sustainable Value Added' 220 (2016) Procedia - Social and Behavioral Sciences 177; JP Mika et al, 'Manahau: Toward an Indigenous Māori Theory of Value' 21 (2022) Philosophy of Management 441–63.

[73]Lüdeke-Freund et al (n 68); E Maitre-Ekern, 'Re-Thinking Producer Responsibility for a Sustainable Circular Economy from Extended Producer Responsibility to Pre-Market Producer Responsibility' 286 (2021) Journal of Cleaner Production 125454; D Monciardini et al, 'Circular Economy Regulation: An Emerging Research Agenda' in A Alexander, S Pascucci and F Charnley (eds), *Handbook of the Circular Economy: Transitions and Transformation* (De Gruyter 2023).

[74]T Novitz, 'Past and Future Work at the International Labour Organization: Labour as a Fictitious Commodity, Countermovement and Sustainability' 17 (2020) International Organizations Law Review 10, 39.

[75]A Brisman and N South, 'Environment, Conflict and Profit – Harmful Resource Exploitation and Questionable Revenue Generation', in T Spapens et al (eds) *Green Crimes and Dirty Money* (Routledge 2018) Ch. 3.

[76]E Gilbert, 'Beyond the Usual Suspects: Invisible Labour(ers) in Futures of Work' 17 (2022) Geography Compass e12675.

[77]B Sjåfjell, 'How Company Law Has Failed Human Rights – and What to Do About It' 5 (2020) Business and Human Rights Journal 179.

[78]S Lister, 'The Role of Democracy in Sustainable Development' (*UNDP Blog*, 14 September 2023) <https://www.undp.org/blog/role-democracy-sustainable-development> accessed 4 January 2024; UN Human Rights Council, *Human Rights, Democracy and the Rule of Law* (United Nations General Assembly 2015) UN Resolution A/HRC/RES/28/14 <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G15/073/79/PDF/G1507379.pdf?OpenElement> accessed 14 August 2024.

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This transformation will in turn require more than the improvements in resource-efficiency and recyclability promoted in current approaches to circular economy business models, and more than the (at best) minimalist 'do no harm' respect for human rights of current sustainable corporate governance initiatives. Ultimately, we envisage sustainable value creation as a shift away from the current competition-driven 'winner takes it all' business mentality with infinite growth as a goal and a trail of harmful externalities in its path, to value creation that is based on socially and ecologically situated cooperation and coevolution.

C. Sustainability risks fall short of capturing the hazards of continued unsustainabilities

Business depends critically on the continued resilience of the world's societies and Earth's living systems, yet business today continues putting the global environment under increasing pressure; and the consequences of ignoring biophysical constraints and societal impacts are increasingly clear.[79] History gives plenty of warning signals about what it means for societies to operate outside of safe environmental conditions[80]: ideas of fairness and justice are challenged profoundly in disruptive shifts to alternative social configurations. Although awareness of the financial and corporate risks of continued unsustainability has begun to inform business and policy, we see severely problematic aspects in current approaches.

The recognition of financial risks of climate change is shaping the emerging discourse and approaches, as we return to below. Yet, the simplifying assumptions used to characterise and manage these risks can themselves present problematic hazards. They embody a representation of the world as quantifiable, predictable and to some degree optimizable. Today's global change science and technology, such as Earth observations from space, can increasingly detect and attribute human-caused climatic and ecological changes even as they happen.[81] However, because of the interdependence of social and ecological systems, biophysical science alone cannot make a complete evaluation of the risks[82] or the responsibilities.[83] The systemic risks associated with Anthropocene changes,[84] cannot be adequately captured in a single global physical metric like a carbon budget, nor as an aggregate economic valuation expressed in euros, dollars or any other currency. Scientific understanding of complex Earth system dynamics makes clear that the future consequences of human-driven environmental changes cannot be precisely predicted.

Also, global environmental risks are too often presented as an abstract dehumanised problem rather than as human-caused problems that can actually be mitigated or halted through business action. And when the human causes are acknowledged, it is too often in terms of a globally undifferentiated 'humanity' that obscures systematic and structural issues of injustice linked to exploitative and neocolonialist corporate behaviours. The actual intertwined social and ecological consequences frequently are not considered at all, but instead are either regarded as external to business or are simply taken to be subsumed within financial risks to the business.

[79]UN Environment, *Global Environment Outlook – GEO-6: Healthy Planet, Healthy People* (edited by P Ekins, J Gupta and P Boileau, Cambridge University Press 2019); UNIDO and GEF, 'Mobilizing Industry for Environmental Action: Inclusive and Sustainable Industrial Development' (2017) UN Industrial Development Organization and Global Environment Facility 2017–11 <https://www.unido.org/sites/default/files/2017-11/GEF_UNIDO_PRINT-Nov17_FINAL_FOR_PRINT.pdf> accessed 4 January 2024.

[80]C Ponting, *A New Green History of The World* (Penguin Books 2007).

[81]MD Mahecha et al, 'Earth System Data Cubes Unravel Global Multivariate Dynamics' 11 (2020) Earth System Dynamics 201; C Persello et al, 'Deep Learning and Earth Observation to Support the Sustainable Development Goals: Current Approaches, Open Challenges, and Future Opportunities' 10 (2022) IEEE Geoscience and Remote Sensing Magazine 172.

[82]B Reyers and ER Selig, 'Global Targets That Reveal the Social–Ecological Interdependencies of Sustainable Development' 4 (2020) Nature Ecology & Evolution 1011.

[83]RB Skeie et al, 'Perspective Has a Strong Effect on the Calculation of Historical Contributions to Global Warming' 12 (2017) Environmental Research Letters 024022.

[84]PW Keys et al, 'Anthropocene Risk' 2 (2019) Nature Sustainability 667.

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Table 2. The highest-ranked global risks in terms of likelihood identified in annual World Economic Forum surveys for The Global Risks Report 2010–2023 (compiled by the authors from annual reports available at www.weforum.org/reports).

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Asset price collapse	Storms and cyclones	Income disparity	Income disparity	Income disparity	Interstate conflict	Involuntary migration	Extreme weather	Extreme weather	Extreme weather	Extreme weather	Extreme weather	Climate action failure	Failure to mitigate climate change
Slowing Chinese economy	Flooding	Chronic fiscal imbalances	Chronic fiscal imbalances	Extreme weather	Extreme weather	Extreme weather	Involuntary migration	Natural disasters	Climate action failure	Climate action failure	Climate action failure	Extreme weather	Failure of climate change adaption
Chronic disease	Corruption	Rising ghg emissions	Rising ghg emissions	Unemploy-ment	Regional governance failure	Climate action failure	Natural disasters	Cyber attacks	Natural disaster	Natural disasters	Human environ-mental damage	Biodiversity loss	Natural disasters & extreme weather
Fiscal crisis	Biodiversity loss	Cyber attacks	Water supply crisis	Climate change	State collapse	Interstate conflict	Terrorist attacks	Data fraud or theft	Data fraud or theft	Biodiversity loss	Infectious diseases	Social cohesion erosion	Biodiversity loss and ecosystem collapse
Global governance gaps	Climate change	Water supply crisis	Aging population	Cyber attacks	Unemploy-ment	Natural disasters	Data fraud or theft	Climate action failure	Cyber attacks	Human-made disasters	Biodiversity loss	Livelihood crises	Large-scale involuntary migration

Key: Economic
Social
Geopolitical
Technological
Environmental

Indeed, until recently, most efforts for global environmental governance were framed in terms of national responsibility, concentrating on state actors.[85] Now, the global heterogeneity of environmental impacts increasingly motivates scientific and political efforts to more precisely place responsibility on the range of actors who cause them.[86]

The World Economic Forum's series of Global Risks Reports document the business world's growing concern about environmental risks (Table 2). However, this does not necessarily signal that business is better prepared now for a future of global change than it was fifteen years ago. Preparedness requires, for business, as it does for policymakers, internalising the recognition that environmental risks are inextricably linked with social, economic, geopolitical and technological changes. Without this internalisation, the pursuit of short-term economic gains rather than investing in the shift to sustainable practices is more likely to compound global-scale risks than to provide a buffer against them. Shifting risks and resilience to disruptive changes (including to intended transformations) will need to be captured in a richer multidimensional research-based story that expresses intertwined social and ecological concerns and possibilities,[87] not just 'science-based' quantitative assessments of qualitatively degraded biophysical conditions.

[85]For instance, both the UN Framework Convention on Climate Change and the Convention on Biological Diversity require national action plans that provide information on implementation and effectiveness of measures taken, reflecting specific national circumstances.

[86]M Damiani, N Ferrara and F Ardente, 'Understanding Product Environmental Footprint and Organisation Environmental Footprint Methods' (2022) Joint Research Centre, European Commission KJ-NA-31-236-EN-N <https://op.europa.eu/en/publication-detail/-/publication/c43b9684-4521-11ed-92ed-01aa75ed71a1/language-en> accessed 14 August 2024; European Commission, 'Circular Economy for Textiles: Taking Responsibility to Reduce, Reuse and Recycle Textile Waste and Boosting Markets for Used Textiles' (*European Commission*, 3 July 2023) <https://ec.europa.eu/commission/presscorner/detail/en/ip_23_3635> accessed 4 January 2024; V Galaz et al, 'Finance and the Earth System – Exploring the Links between Financial Actors and Non-Linear Changes in the Climate System' 53 (2018) Global Environmental Change 296; M Nyström et al, 'Anatomy and Resilience of the Global Production Ecosystem' 575 (2019) Nature 98; Skeie et al (n 83).

[87]The World Bank, *World Development Report 2014: Risk and Opportunity – Managing Risk for Development* (The World Bank 2014); J Mochizuki et al, An Overdue Alignment of Risk and Resilience? A Conceptual Contribution to Community Resilience 42 (2018) Disasters 361.

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D. Risks of unsustainability can act as a driver for change

The recognition of financial risks of climate change has placed the connection between business and environmental unsustainabilities under unprecedented scrutiny. It is acting as a driver of change, and creating a new locus of science–business–policy interactions.

The recommendations presented by the business-driven 'Task Force on Climate-Related Financial Disclosures' (TCFD)[88] are regarded as a gold standard for business.[89] The recommendations, while informed by the science basis for recognising that climate change entails financial risks, were based on consultations with business.[90] The TCFD was led by the US business person and politician Michael R. Bloomberg, and its 31 international members included '*providers of capital, insurers, large non-financial companies, accounting and consulting firms, and credit rating agencies*'.[91] In 2023, its final year, the TCFD had close to 5000 'supporters', apparently representing a '*combined market capitalisation of $29.5 trillion (£23.5 trillion), with over 1,800 financial institutions responsible for assets of $222.2 trillion*'.[92] The TCFD had international legitimacy (especially in high-income countries) from the start, as it was established by the Financial Stability Board, an '*international body*' endorsed by the Heads of Government and State of the Group of Twenty (G20), a group of the world's major economies.[93]

As we show in Section 4, the TCFD is also regarded as a template for international and European regulatory initiatives. Indeed, according to the TCFD itself, 19 jurisdictions (including the EU), representing '*close to 60% of global 2022 gross domestic product*', have requirements of some kind that incorporate or draw on the TCFD recommendations.[94]

However, when analysed from a research-based sustainability perspective, the TCFD recommendations have shortcomings, beyond the obvious point that the report concentrates only on climate change. The TCFD's approach to physical risks is limited, and human and societal impacts are not included in its risk categories.[95] Yet, international recognition of the recommendations is unaffected by these shortcomings, with the International Sustainability Standards Board taking over the follow-up from 2024.[96]

The recognition of environmental risks of unsustainability is now broadening towards encompassing financial risks of biodiversity loss, through the 'Task Force for Nature-Related Financial Disclosures' (TNFD), launched in 2021 and with the first version of recommendations

[88]Task Force on Climate-related Financial Disclosures, *Final Report: Recommendations of the Task Force on Climate-Related Financial Disclosures* (TCFD 2017) <https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf> accessed 14 August 2024.

[89]See already in 2020, B Nauman and A Mooney, 'Larry Fink Rules on the Best Global Standards for Climate Risk Reporting' *Financial Times* (2020) <https://www.ft.com/content/fc51227b-9d64-4e5a-b1e2-f6c07f4caa58> accessed 14 August 2024.

[90]Task Force on Climate-related Financial Disclosures, *Final Report: Recommendations of the Task Force on Climate-Related Financial Disclosures* (TCFD 2017) <https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf> accessed 14 August 2024, see eg introductory letter to Mark Carney (p 2).

[91]TCFD, *Task Force on Climate-Related Financial Disclosures: Overview* (TCFD 2022) <https://assets.bbhub.io/company/sites/60/2022/12/tcfd-2022-overview-booklet.pdf> accessed 14 August 2024.

[92]J McAlpine, 'TCFD Reporting Is a Huge Opportunity for Asset Managers' *Morningstar UK* (6 February 2024) <https://www.morningstar.co.uk/uk/news/245785/tcfd-reporting-is-a-huge-opportunity-for-asset-managers.aspx> accessed 7 August 2024.

[93]See Financial Stability Board <https://www.fsb.org/about/history-of-the-fsb/> accessed 6 March 2024.

[94]TCFD, *The Task Force for Climate-Related Financial Disclosures: 2023 Status Report* (TCFD 2023) <https://assets.bbhub.io/company/sites/60/2023/09/2023-Status-Report.pdf> 83.

[95]B Sjåfjell, 'Taking Finance Seriously: Understanding the Financial Risks of Unsustainability' in K Alexander, M Gargantini and M Siri (eds), *The Cambridge Handbook of EU Sustainable Finance: Regulation, Supervision and Governance* (Cambridge University Press in print 2025) Ch. 2. Preprint available at <https://ssrn.com/abstract=4294693> accessed 17 March 2023.

[96]IFRS, *IFRS Foundation Welcomes Culmination of TCFD Work and Transfer of TCFD Monitoring Responsibilities to ISSB from 2024* (The International Financial Reporting Standards Foundation 2023) <https://www.ifrs.org/news-and-events/news/2023/07/foundation-welcomes-tcfd-responsibilities-from-2024/> accessed 4 January 2024. The ISSB itself was founded on the basis of the TCFD, <https://www.ifrs.org/news-and-events/news/2021/11/ifrs-foundation-announces-issb-consolidation-with-cdsb-vrf-publication-of-prototypes//>

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published in 2023.[97] The aim is an *'integrated approach to climate- and nature-related risks, scaling up finance for nature-based solutions'*.[98] It is positive that the discussion of risks now addresses biodiversity as well as climate change. However, criticism has been raised of corporate capture of the process, highlighting the risk of continued greenwashing.[99] As commentators have highlighted, allowing a group of *'executives from big corporations and financial institutions'* to set the ground rules for disclosure in this area, raises serious questions about '*representation, accountability and conflict of interest*'.[100] Indeed, the 'Task Force' itself consists of 40 '*senior executives from financial institutions, corporates and market service providers*'. One of the two co-chairs is from the United Nations Environmental Programme, lending international legitimacy to the project.[101] Further legitimacy is bestowed upon the TNFD by its long list of '*Knowledge Partners*', including academic institutions (amongst them Stockholm Resilience Centre, a key science organisation behind the planetary boundaries framework), the International Sustainability Standards Board (ISSB),[102] and more recently, the European Financial Reporting Advisory Group (EFRAG).[103] Civil society has criticised TNFD for working in a way that is *'shrouded in secrecy'* and developing a framework that *'is distracting from, and undermining, real and sustainable solutions'*.[104]

It is not fruitful to develop, piece by piece, risk frameworks for each aspect of sustainability, nor to impose approaches designed for climate change onto other environmental challenges.[105] The limited and fragmented disclosure infrastructure that TCFD and TNFD have been outlining for business action may give rise to an increase in the financial and corporate risks of unsustainability, undermining the integration of sustainability into corporate governance.

Rather, risks must be dealt with together, within the framework of a research-based concept of sustainability.[106] An indication of such a safe and just approach is presented by Sjåfjell,[107] and summarised in Table 3 below. Categories of unsustainability are proposed that encompass the continued pressures on planetary boundaries (exemplified with climate change, biodiversity loss and novel entities), and the undermining of social foundations (showing human rights violations, lack of decent work and tax evasion as examples). Broadened risk categories are also proposed, with *business model change* added to the transition risks, and *global*

[97]TNFD, 'Taskforce on Nature-Related Financial Disclosures' (TNFD) <https://tnfd.global/> accessed 14 August 2024.

[98]Ibid., Principle 6.

[99]H Greep, 'Latest Draft Shows That TNFD's Reputation "as the next Frontier in Corporate Greenwashing on Nature" Remains Solidly Intact' *Banktrack* (7 November 2022) <https://www.banktrack.org/article/latest_draft_shows_that_tnfd_s_reputation_as_the_next_frontier_in_corporate_greenwashing_on_nature_remains_solidly_intact> accessed 30 November 2022.

[100]S Mundy and G Tett, 'How Regulators Have Relinquished Their Work to Corporate Executives' *Financial Times* (20 September 2023) <https://www.ft.com/content/0aa1eb56-f5e4-47d0-9e33-5e5310a3eb1f> accessed 23 November 2023.

[101]See Taskforce on Nature-related Financial Disclosures <https://tnfd.global/about/the-taskforce/> accessed 6 March 2024.

[102]ISSB was set up by the IFRS Foundation in 2021, IFRS, 'About the International Sustainability Standards Board' <https://www.ifrs.org/groups/international-sustainability-standards-board/> accessed 6 March 2024. The IFRS Foundation has its origin in an initiative by professional accounting bodies of Australia, Canada, France, Germany, Japan, Mexico, Netherlands, United Kingdom/Ireland and the United States, IFRS, 'Who we are' <https://www.ifrs.org/about-us/who-we-are/#history> accessed 6 March 2024.

[103]EFRAG, a private institution that provides input to the European Commission on reporting, signed a cooperation agreement with TNFD in December 2023, 'to further advance nature-related reporting', <https://www.efrag.org/News/Public-469/EFRAG-and-TNFD-sign-a-cooperation-agreement-to-further-advance-Nature-related-Reporting> accessed 6 March 2024.

[104]T Feitosa et al, *Joint Open Letter to the TNFD: Your Work Is Undermining the Real Solutions to the Nature Crisis* (Forests & Finance Coalition 2023) <https://forestsandfinance.org/wp-content/uploads/2023/08/Joint-CSO-letter-to-the-TNFD.pdf>.

[105]C Corson et al, 'Assembling Global Conservation Governance' 103 (2019) Geoforum 56.

[106]B Crona et al, 'The Anthropocene Reality of Financial Risk' (2021) 4 One Earth 618; Keys et al (n 84).

[107]Sjåfjell, 'Taking Finance Seriously' (n 95).

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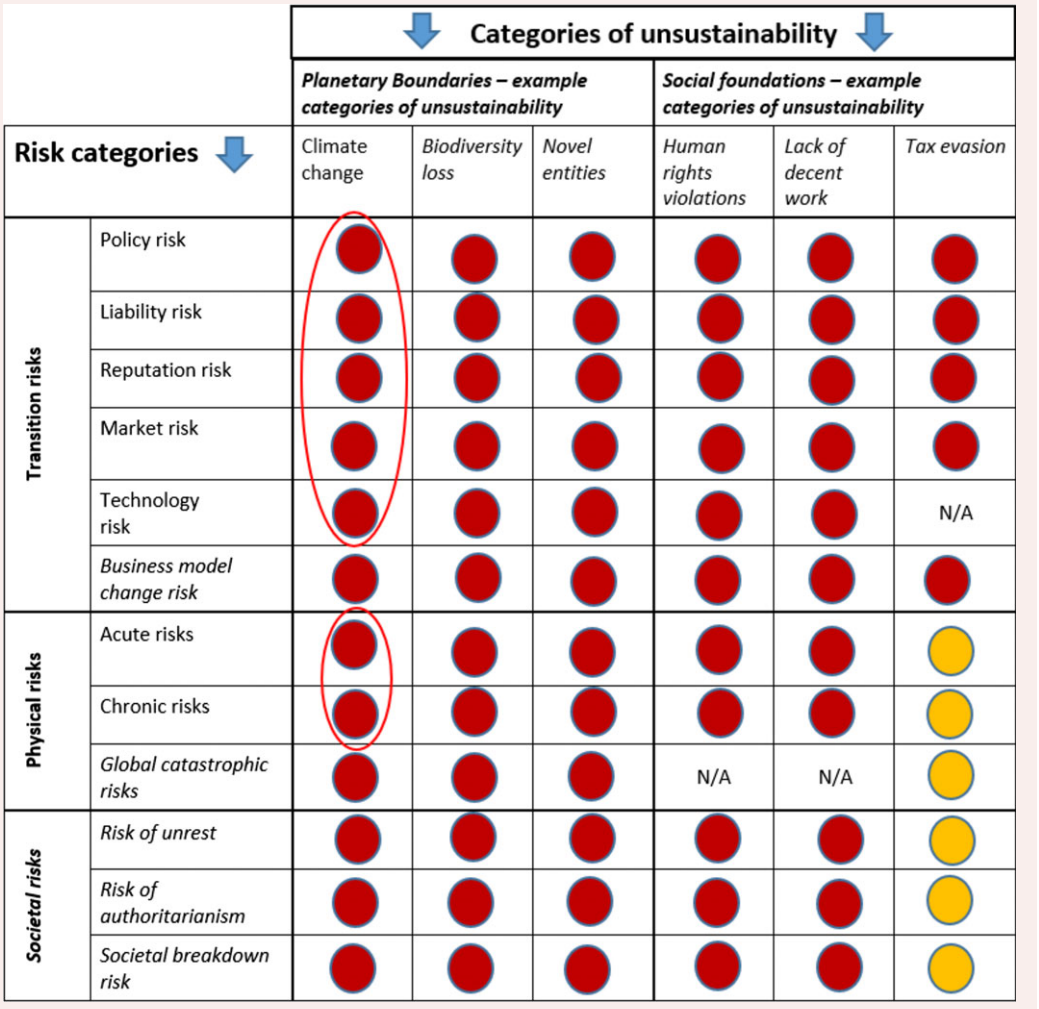
Table 3. Risks of unsustainability



Source: Sjåfjell 2024, drawing on teamwork in the SMART project, notably Sjåfjell et al 2020. Unsustainability categories are shown in vertical columns, risk categories in horizontal rows. Red circles indicate that environmental degradation or social harm entails direct risks within the various risk categories. Orange circles indicate indirect risk, while N/A explains that the category of unsustainability is not assumed to involve the specific risk category. The red outline highlights the seven categories from the dominant climate risk approach introduced in TCFD 2017. Italics indicate new risk categories.

catastrophic risk to the physical risks. Further, *societal risks,* including unrest, authoritarianism and societal breakdown, is added as a new risk category. This broader approach to risks of unsustainability sets sustainability at the heart of business governance, and could be part of an adaptive, responsive system for sustainable corporate governance. This could increase resilience to the poorly predictable, weakly controllable, and increasingly turbulent global conditions that are anticipated.

Yet, this research-based conceptualisation of risks of unsustainability remains in contrast to actual business approaches, where sustainability risks are regarded as an add-on that can be dealt with through voluntary disclosure. As we show below in Section 4, policymaking follows up along the same lines, dealing with sustainability risks as a matter of reporting and disclosure requirements.

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Critiques of today's science–business–policy interfaces from civil society and academic actors are muted, despite the ways that these interfaces actually reproduce hegemonic discourse(s) and existing power relations.[108] In these coalitions of elites, no space is given for other people's experiences and capabilities. Academic norms of neutrality and scientific objectivity generate strong incentives to suppress critical debate, where views that depart from the authoritative 'science-based' messages are seen as radical or political statements, as if the recommendations for transformation that are being made were somehow apolitical. The room for nuanced and constructive discussions of how to ensure the contribution of business to a safe and just space is thereby deeply constrained.

4 What is the EU actually doing?

A. The EU's unrealised potential as a supranational power

Compared to international law, the supranational legal order of the EU[109] has unprecedented power to regulate market actors. The EU can regulate, shape and influence decision-making in the many businesses, small and large, that are headquartered or based in the EU. The EU's regulatory power has limitations, including its shared competence with EU Member States in key areas. Yet, the EU is both a powerful European legislator and a global actor, and its influence goes beyond its actual regulatory competence.[110] The EU Commission's flagship programme, the European Green Deal, highlights that as *'the world's largest single market, the EU can set standards that apply across global value chains'* and support European and global markets for '*sustainable products*'.[111] The EU accordingly has the potential for integrating sustainability in and across globalised and interconnected business.

This gives rise to the question of whether we can trace any research-based understanding of sustainability in the EU's policy documents and legislative initiatives. Certainly, the planetary boundaries concept has gained interest.[112] It is seen as a multidimensional framework for analysing systemic effects of environmental policies, helping identify opportunities for vertical (cross-scale) and horizontal (cross-sectoral) coherence in policy planning and implementation. It is also seen as providing a basis for specifying 'absolute' environmental sustainability criteria that help characterise and concretize aspirational statements. The EU's 8th Environment Action Programme sets out amongst its priority objectives that *'people live well, within the planetary*

[108]E Turnhout, 'A Better Knowledge is Possible: Transforming Environmental Science for Justice and Pluralism' 155 (2024) Environmental Science & Policy 103729; S Quahe et al, 'Framing Science-Based Targets: Reformist and Radical Discourses in an Earth System Governance Initiative' 18 (2023) Earth System Governance 100196.

[109]A von Bogdandy, 'Neither an International Organization Nor A Nation State: The EU as a Supranational Federation' in E Jones, A Menon and S Weatherill (eds), *The Oxford Handbook of the European Union* (Oxford University Press 2012).

[110]A Bradford, 'The Brussels Effect' in A Bradford (ed), *The Brussels Effect* (Oxford University Press 2020).

[111]European Commission, 'Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. The European Green Deal. COM/2019/640 Final' (2019) Section 3. Launched by the 2019–2024 Commission, the Political Guidelines for the European Commission 2024–2029 confirm the commitment to continue with the programme set out in the Green Deal: 'We must and will stay the course on the goals set out in the European Green Deal', 3, <https://commission.europa.eu/document/download/e6cd4328-673c-4e7a-8683-f63ffb2cf648_en?filename=Political%20Guidelines%202024-2029_EN.pdf> accessed 14 August 2024.

[112]Eg H Dao et al, *Environmental Limits and Swiss Footprints Based on Planetary Boundaries* (UNEP/GRID-Geneva & University of Geneva 2015); T Häyhä et al, 'Operationalizing the Concept of a Safe Operating Space at the EU Level – First Steps and Explorations' (2018) Stockholm Resilience Centre SRC Technical Report <https://www.stockholmresilience.org/publications/artiklar/2018-07-03-operationalizing-the-concept-of-a-safe-operating-space-at-the-eu-level—first-steps-and-explorations.html> accessed 22 November 2020; P Lucas and H Wilting, 'Using Planetary Boundaries to Support National Implementation of Environment-Related Sustainable Development Goals' (2018) PBL Netherlands Environmental Assessment Agency PBL-2748; B Nykvist et al, 'National Environmental Performance on Planetary Boundaries: A Study for the Swedish Environmental Protection Agency' (2013) Stockholm Environment Institute and Stockholm Resilience Centre at Stockholm University 6576 <http://www.naturvardsverket.se/Documents/publikationer6400/978-91-620-6576-8.pdf> accessed 1 July 2016.

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boundaries in a well-being economy where nothing is wasted, growth is regenerative, climate neutrality in the Union has been achieved and inequalities have been significantly reduced'.[113]

It is symptomatic, however, that neither the European Green Deal nor one of its major building blocks, the EU's Sustainable Finance initiative,[114] mention 'boundaries' or any form of constraints or limits although apparently acknowledging the severity of environmental degradation. The Green Deal recognises that *'the global climate and environmental challenges are a significant threat multiplier and a source of instability'* and the *'ecological transition will reshape geopolitics, including global economic, trade and security interests'*, and it expresses an aim to work with all partners to *'support a just transition globally'*.[115] However, the central aim appears to be to support the EU's own transition rather than fully engaging with global goals for a sustainable future. And in line with the dominant finance-driven approaches, its emphasis on 'sustainability risks' is limited to climate and environmental risks, excluding human and societal risks.[116] Indeed, the EU's initiatives have been assessed as lacking integration of all aspects of sustainability, including a lack of recognition of ecological limits of our planet.[117]

Further, the Green Deal sets out from the start that it is a *'new growth strategy … where economic growth is decoupled from resource use'*.[118] *'Regenerative growth'* is also the approach of the 8th Environment Action Programme. Yet, there is very little research-based support for this premise.[119] Measuring the EU's ambitious environmental goals against empirical results underlines this point: EU countries mainly exceed their share of global limits.[120] While EU countries may have made progress preventing their own local environmental harms, they are contributing to eroded resilience far beyond their territories. Analysis shows that European pressures on planetary boundaries often have regional impacts that are crucial in low and lowest-income countries, undermining their access to resources necessary for positive social development.[121] These two points are interconnected, both because breaching planetary boundaries will have greater impacts on some countries due to their geographic location, and because most-impacted countries may have fewer economic resources available for adaptation.[122]

These empirical results on European consumption and production are not in line with the EU's overarching Treaty aims on sustainability, nor, specifically, its provision dealing with the relationship between the EU and the international community, where the EU expresses that it

[113]Council European Parliament and Council Decision (EU) 2022/591 of the European Parliament and of the Council of 6 April 2022 on a General Union Environment Action Programme to 2030 [2022] OJ L 114, 22–36, Art 2(1).

[114]European Commission, 'Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions. Action Plan on Financing Sustainable Growth' (2018) Commission Communication COM/2018/097 final.

[115]The European Green Deal (n 111) Section 3.

[116]Ibid., Section 2.2.1.

[117]EEA, *The European Environment — State and Outlook 2020. Knowledge for Transition to a Sustainable Europe* (European Environment Agency/Publications Office of the European Union 2019) <https://www.eea.europa.eu/soer/publications/soer-2020> accessed 16 February 2023, 314, 385.

[118]The European Green Deal (n 111) Section 1.

[119]T Jackson, *Prosperity without Growth: Foundations for the Economy of Tomorrow*, 2nd ed. (Routledge 2017); T Parrique et al, 'Decoupling Debunked: Evidence and Arguments against Green Growth as a Sole Strategy for Sustainability' (2019) European Environmental Bureau <https://eeb.org/library/decoupling-debunked/> accessed 16 February 2023; Raworth, *Doughnut Economics* (n 14).

[120]EEA and FOEN (n 16); Häyhä et al (n 112); ES Mengual and S Sala, 'Consumption Footprint and Domestic Footprint: Assessing the Environmental Impacts of EU Consumption and Production. Life Cycle Assessment to Support the European Green Deal' (2023) Publications Office of the European Union JRC Science for Policy Report JRC128571 <https://doi.org/10.2760/218540>.

[121]EEA and FOEN (n 16).

[122]J Roy et al, 'Sustainable Development, Poverty Eradication and Reducing Inequalities' in V Masson-Delmotte et al (eds), *Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C Above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty* (Cambridge University Press 2018).

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shall *'foster the sustainable economic, social and environmental development of developing countries, with the primary aim of eradicating poverty'* (Treaty on European Union, Article 21(2)(d) and (f)). Policy coherence for development is set out as an EU legal norm in the Treaty on Functioning of the European Union, Article 208, requiring that any area of EU law and policy must not work against development policies, also with the sustainability aim of 'leaving no one behind'.[123]

The emphasis in the EU Green Deal on creating a Just Transition and leaving 'no one behind' appears generally to be limited to ensuring justice in the transition to sustainability within the EU Member States. References to those 'most vulnerable' do not appear to encompass vulnerable people and communities outside of the European Union.[124] Yet, the vulnerability of workers across global value chains is exacerbated through *'business model(s) based on exploitation and abuse of human rights'*.[125] Indigenous Peoples are amongst the most vulnerable communities, exposed to exploitation by states and businesses alike.[126] The Green Deal makes no mention of Indigenous Peoples, in Europe or in the rest of the world. This omission is contrary to the environmental aims of the Green Deal, as their traditional land management strategies are among the world's most effective in protecting biodiversity and contributing to climate mitigation.[127] It is also, and most crucially, a missed opportunity to confront the long history, within and beyond Europe, of exploitation of Indigenous Peoples, from colonisation by states to the ongoing neo-colonisation by business.[128]

B. Thwarted EU attempts at regulating business for sustainability

EU institutions have a Treaty-based duty, with a correspondingly clear legal basis, to integrate sustainability into the governance of European business.[129] Meeting this duty requires a fundamental change in the regulation of business. The current regulatory framework for business has encouraged the perception that minimum compliance with (insufficient) legal requirements is adequate. In practice, the individual legal entity of the company is still allowed to externalise its responsibility for negative environmental and societal impacts. The EU recognises the need for

[123]Leave no one behind is 'the central, transformative promise of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs)', UN Sustainable Development Group 'Leave No One Behind' <https://unsdg.un.org/2030-agenda/universal-values/leave-no-one-behind> accessed 14 August 2024, and is one of the six Guiding Principles of the United Nations Sustainable Development Cooperation Framework Guidance. The EU is committed to this principle in its New European Consensus on Development (2017), European Commission, 'European Consensus on Development' <https://international-partnerships.ec.europa.eu/policies/european-development-policy/european-consensus-development_en> accessed 14 August 2024.

[124]The European Green Deal (n 111) Section 2.2.1.

[125]ITUC, 'New ITUC Report Exposes Hidden Workforce of 116 Million in Global Supply Chains of Fifty Companies' (2016) ITUC <https://www.ituc-csi.org/new-ituc-report-exposes-hidden> accessed 14 June 2020.

[126]Eg United Nations, 'Indigenous Peoples' Territories, Resources Still Being Seized, Exploited, Despite International Standards Guaranteeing Their Rights, Speakers Tell Permanent Forum' (2022) United Nations <https://press.un.org/en/2022/hr5468.doc.htm> accessed 14 August 2024.

[127]N Redvers et al, 'Indigenous Solutions to the Climate and Biodiversity Crises: A Reflection on UNDRIP' 3 (2023) PLOS Global Public Health e0002060; M Tengö et al, 'Dialogue Workshop on Knowledge for the 21st Century: Indigenous Knowledge, Traditional Knowledge, Science and Connecting Diverse Knowledge Systems' (Stockholm Resilience Centre 2012); SwedBio Workshop Report <https://swed.bio/wp-content/uploads/2017/05/Guna_Yala_Dialogue_Workshop_Report.pdf> accessed 14 August 2024.

[128]Eg, European Parliament, 'European Parliament Resolution of 3 July 2018 on Violation of the Rights of Indigenous Peoples in the World, Including Land Grabbing' (2018) 2017/2206(INI); D Lupin Townsend and L Townsend, 'Epistemic Injustice and Indigenous Peoples in the Inter-American Human Rights System' 0 (2020) Social Epistemology 1; L Williams et al, 'A Global De-Colonial Praxis of Sustainability – Undoing Epistemic Violences between Indigenous Peoples and Those No Longer Indigenous to Place' 47 (2018) The Australian Journal of Indigenous Education 41.

[129]B Sjåfjell, 'Reforming EU Company Law to Secure the Future of European Business' 18 (2021) European Company and Financial Law Review 190.

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regulatory reform. This may be the beginning of a shift away from a siloed approach where environmental law and policy were perceived to be sufficient to ensure adequate environmental protection, where labour issues could be left to labour law and human rights issues to human rights law, etc. Business law currently reinforces the inherent limitations of this siloed approach and is associated with negative environmental and social business impacts.[130]

The current emphasis on regulating businesses to integrate aspects of sustainability into their governance may be traced back to changes in EU policy perceptions after the 2007-2008 financial crisis. For many years, corporate social responsibility (CSR) was conceptually the umbrella under which business impact on society was discussed. After the financial crisis, the Commission in 2011 revised its 2002 definition of CSR, rejecting mere voluntary integration by business of '*social and environmental concerns in their business operations*', and explicitly discussing the responsibility of business for impact on society.[131] Yet, the legislative follow-up was limited.

One outcome was the adoption of the so-called Non-Financial Reporting Directive of 2014,[132] which set out requirements for reporting by the largest businesses on 'the impact of [their] activity, relating to, as a minimum, environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters'.[133] The approach of the Directive, including the lack of enforcement of the reporting requirements and of requirements for verification of the information provided by companies, negated the legislative aim of shifting businesses onto a sustainable path. The Directive gave far too much discretion to Member States on the implementation, and to businesses on the reporting (with a 'comply or explain' approach) for these reporting rules to have significant impact.[134] By not confronting the social norm of shareholder primacy, the chasm remained between the perceived role and duty of the board and management (to maximise returns for shareholders), and the 'non-financial' issues that boards and management were asked to report on. However, the 2014 Directive shifted the focus in the EU Accounting Directives on information relating to environmental and employee matters, which since 2003 had focused narrowly on the financial impact on business of such matters,[135] and opened up for a broader debate on the responsibility of business to contribute to sustainability.

The EU responded to the corporate governance failures exposed by the financial collapses and scandals in the 2007–2008 financial crisis, with a strong belief in the potential of better shareholder engagement as a way forward.[136] After several years of negotiations, facing resistance against the very idea of imposing any kind of duties, however mild, on shareholders, the EU adopted the

[130]Bruner and Sjåfjell (n 65).

[131]European Commission, 'A Renewed EU Strategy 2011–14 for Corporate Social Responsibility' (2011) COM/2011/0681 final.

[132]European Parliament and Council Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 Amending Directive 2013/34/EU as Regards Disclosure of Non-Financial and Diversity Information by Certain Large Undertakings and Groups (Text with EEA Relevance) OJ L 330, 15.11.2014, 1–9.

[133]Directive 2013/34/EU of the European Parliament and of the Council of 26 June 2013 on the annual financial statements, consolidated financial statements and related reports of certain types of undertakings, amending Directive 2006/43/EC of the European Parliament and of the Council and repealing Council Directives 78/660/EEC and 83/349/EEC, as amended by Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups, Art 19a.

[134]Eg Alliance for Corporate Transparency, *The Alliance for Corporate Transparency Research Report 2019: An Analysis of the Sustainability Reports of 1000 Companies Pursuant to the EU Non-Financial Reporting Directive* (Alliance for Corporate Transparency and Frank Bold 2019) <https://www.allianceforcorporatetransparency.org/assets/2019_Research_Report%20_Alliance_for_Corporate_Transparency.pdf> accessed 16 February 2023.

[135]J Mähönen, 'Comprehensive Approach to Relevant and Reliable Reporting in Europe: A Dream Impossible?' 12 (2020) Sustainability 5277.

[136]European Commission, 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Action Plan: European Company Law and Corporate Governance – a Modern Legal Framework for More Engaged Shareholders and Sustainable Companies' (2012) COM/2012/0740 final.

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reform of the Shareholder Rights Directive in 2017.[137] The Shareholder Rights Directive II seeks to encourage shareholders and notable institutional investors to become more active in a long-term and sustainability-oriented way and disclose their policies accordingly.[138] This may be seen as part of a global stewardship debate, discussing the potential of shareholder governance in promoting sustainability.[139] Moving from a narrow view on shareholder rights to a more open discussion on shareholder responsibilities and their role in corporate governance is positive. However, references to sustainability in the Directive were mainly framed as '*the long-term interests and sustainability of the company as a whole*'.[140] There is only one mention in the Directive itself of broader issues, with '*social and environmental impact and corporate governance*' included in a long list of issues to be taken into account in the engagement policy of institutional investors and asset managers.[141] The indication that 'environmental, social and governance matters' also could be included, '*where appropriate*', in the assessment of '*[d]irectors' performance*', never made it further than the Preamble of the Directive.[142]

In 2018, informed by the specific understanding of financial risks of climate change in the TCFD recommendations, the Commission launched its Action Plan for Financing Sustainable Growth,[143] and what has become commonly known as the Sustainable Finance initiative. European financial markets provide the credit and financing required for businesses in the EU and beyond, making them fundamental to a successful transition to sustainable market activity and vital to realising the EU's commitments on sustainability. An unusually speedy process resulted in legislative instruments of the strongest binding category (EU regulations as opposed to directives), including the Sustainable Finance Disclosure Regulation of 2019[144] and the Taxonomy Regulation of 2020.[145] Both regulations aim to ensure that financial markets have reliable information about which economic activities are sustainable.

Yet the Taxonomy, this '*cornerstone of the EU's sustainable finance framework*',[146] is not about sustainability in any broad, research-based sense. The Taxonomy Regulation seeks to establish the '*criteria for determining whether an economic activity qualifies as environmentally sustainable for the purposes of establishing the degree to which an investment is environmentally sustainable*'.[147] The Taxonomy's six environmental objectives go beyond climate mitigation and adaptation to

[137]European Parliament and Council Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 Amending Directive 2007/36/EC as Regards the Encouragement of Long-Term Shareholder Engagement (Text with EEA Relevance) OJ L 132, 20.5.2017, 1–25.

[138]D Katelouzou and K Sergakis, 'When Harmonization Is Not Enough: Shareholder Stewardship in the European Union' 22 (2021) European Business Organization Law Review 203.

[139]D Katelouzou and DW Puchniak (eds), *Global Shareholder Stewardship* (Cambridge University Press 2022).

[140]European Parliament and Council (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 Amending Directive 2007/36/EC as Regards the Encouragement of Long-Term Shareholder Engagement (Text with EEA Relevance) OJ L 132, 20.5.2017, 1–25, Art 9a (4) with a somewhat different formulation in Art 9a(6).

[141]European Parliament and Council Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 Amending Directive 2007/36/EC as Regards the Encouragement of Long-Term Shareholder Engagement (Text with EEA Relevance) OJ L 132, 20.5.2017, 1–25, Art 3g(a).

[142]European Parliament and Council Directive (EU) 2017/828 of the European Parliament and of the Council of 17 May 2017 Amending Directive 2007/36/EC as Regards the Encouragement of Long-Term Shareholder Engagement (Text with EEA Relevance) OJ L 132, 20.5.2017, 1–25, Recital 29.

[143]Action Plan on Financing Sustainable Growth (2018) (n 114).

[144]European Parliament and Council Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on Sustainability-related Disclosures in the Financial Services Sector (Text with EEA Relevance) [2019] OJ L 317, 1–16 (Sustainable Finance Disclosure Regulation, SFDR).

[145]European Parliament and Council Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the Establishment of a Framework to Facilitate Sustainable Investment, and Amending Regulation (EU) 2019/2088 (Text with EEA Relevance) [2020] OJ L 198, 22.6.2020, 13–43 (Taxonomy Regulation).

[146]European Commission, 'Sustainable Finance Package 2023' (2023) European Commission <https://finance.ec.europa.eu/publications/sustainable-finance-package-2023_en> accessed 9 August 2024

[147]Taxonomy Regulation (n 145) Art 1(1).

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include sustainable use and protection of water and marine resources; the transition to a circular economy; pollution prevention and control; and the protection and restoration of biodiversity and ecosystems.[148] However, the Taxonomy has just one paragraph in its Preamble on the '*systemic nature of global environmental challenges*' and the need for a '*systemic and forward-looking approach*',[149] and it makes no acknowledgement of the ecological limits of our planet and the concurrent urgency of a fundamental transformation.

There is even less consideration of the 'just' aspect of safe and just. The proposal for a separate Social Taxonomy, to complement the environmentally focused Taxonomy Regulation of 2020, has not been followed up.[150] The Taxonomy Regulation expects that an undertaking seeking to have its economic activities classified as environmentally sustainable, will implement procedures to '*ensure the alignment*' with the UNGPs and the OECD Guidelines, and through them, indirectly, also international human rights and labour law.[151] There are no Delegated Acts on these '*minimum safeguards*'. While the Taxonomy has its own 'do no significant harm' rule concerning the six environmental objectives,[152] it references the 'do no significant harm' rule in the Sustainable Finance Disclosure Regulation (SFDR)[153] (which goes beyond the environmental issues to also include social and governance), for the carrying out of the procedures of the 'minimum safeguards'.[154] However, the following up of this is limited and even counterproductive, as we return to below.

The SFDR sets out a relatively broad definition of sustainability risk: an *'environmental, social or governance event or condition'*. Yet, the SFDR does not position its understanding of sustainability risks within any research-based concept of sustainability. In line with the financial risks' underpinning of the Sustainable Finance initiative, the emphasis in the SFDR is on *'actual or a potential material negative impact on the value of the investment'*, rather than on the impact on society.[155] While there is a recognition of the need for urgent action to shift finance in light of the '*the catastrophic and unpredictable consequences of climate change, resource depletion and other sustainability-related issues*' that the EU faces, the choice of regulatory approach is the weak mechanism of disclosure.[156]

As opposed to the Taxonomy Regulation, the SFDR sets out that to '*qualify as a sustainable investment*', an economic activity must contribute to an environmental objective *or* a social objective, provided that it does no significant harm to any of these objectives and '*the investee companies follow good governance practices, in particular with respect to sound management structures, employee relations, remuneration of staff and tax compliance*'.[157] The Commission has highlighted that this, together with the reference from the Taxonomy to the SFDR, '*ensures that minimum social standards are defined at European level, and that there is consistency in European legislation*'.[158] However, the Commission's guidance to ensure a coherent follow-up undermines the potential by stating that '*Taxonomy-aligned economic activities*' are '*deemed*' to have fulfilled

[148]Ibid., Art 9.

[149]Ibid., Recital 7.

[150]The proposal was put forward by the Platform for Sustainable Finance in 2022; Platform on Sustainable Finance, 'Final Report on Social Taxonomy' (2022) European Commission <https://commission.europa.eu/document/d07e1f1e-3a1f-4d55-add4-a130f26b33e3_en> accessed 15 March 2024.

[151]Taxonomy Regulation (n 145), Arts 3(c) and 18(1).

[152]Ibid., Arts 3(b), 9 and 17.

[153]Sustainable Finance Disclosure Regulation (n 144).

[154]Taxonomy Regulation (n 145) Art 18(2), referencing the Sustainable Finance Disclosure Regulation Art 2(17), see further below.

[155]SFDR (n 144), Art 2(22).

[156]SFDR (n 144) Recital 8.

[157]Ibid., Art 2(17).

[158]European Commission, 'Commission Notice on the Interpretation and Implementation of Certain Legal Provisions of the EU Taxonomy Regulation and Links to the Sustainable Finance Disclosure Regulation' (2023) 2023/C 211/01.

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the '*do no significant harm*' and '*good governance*' requirements, with reference to the minimum safeguards of the Taxonomy.[159]

The approach of the Sustainable Finance initiative is constrained by the same flaws and partial scope of the risks approach on which it is based.[160] The limited inclusion of social aspects are, at best, encouragement to do due diligence and to report. We turn now to the developments on reporting and due diligence.

The 2014 Non-Financial Reporting Directive was replaced by the Corporate Sustainability Reporting Directive (CSRD), adopted in 2022.[161] Made possible by the Sustainable Finance Initiative,[162] the CSRD appears to signal a shift towards policymakers taking sustainability aspects as seriously as they for decades have taken traditional financial issues, with firmer rules and auditing requirements.[163] Reforms were very much needed for corporate sustainability reporting requirements (a term preferable to 'non-financial' reporting requirements), to make them more stringent and with requirements for external verification. While covering a broad set of sustainability-relevant aspects, the underpinning of the whole Sustainable Finance initiative is present in the recognition of a '*very significant increase in demand for corporate sustainability information*', a demand '*driven by the changing nature of risks to undertakings and growing investor awareness of the financial implications of those risks*', especially concerning '*climate-related financial risks*'.[164] 'Corporate sustainability' is not defined. Sustainability reporting is defined, though, as reporting on '*sustainability matters*', which '*means environmental, social and human rights, and governance factors*', including those listed in the SFDR.[165] The requirements for the sustainability reporting are embellished compared to the 2014 Directive, and include the business model and strategy, specific requirements for climate objectives, and spelling out the sustainability risks.[166]

The push-back internationally, especially in the United States, and within Europe, against sustainability-oriented ('ESG') legislation,[167] created tension between the EU's own follow-up of the Corporate Sustainability Reporting Directive and the International Financial Reporting Standards body, with a pressure for convergence between international and European sustainability reporting standards. The Commission Delegated Regulation to set out European Sustainability Reporting Standards adopted in July 2023 and seeking this convergence, has been criticised as a step backwards for corporate sustainability reporting.[168] With the TCFD and the

[159]Ibid., Section 4.

[160]H Ahlström and B Sjåfjell, 'Complexity and Uncertainty in Sustainable Finance: An Analysis of the EU Taxonomy' in T Cadman and T Sarker (eds), *De Gruyter Handbook of Sustainable Development and Finance* (De Gruyter 2022).

[161]Parliament and Council Directive (EU) 2022/2464 of the European Parliament and of the Council of 14 December 2022 Amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as Regards Corporate Sustainability Reporting (Text with EEA Relevance), (Corporate Sustainability Reporting Directive, CSRD) OJ L 322 15–80 <http://data.europa.eu/eli/dir/2022/2464/oj/eng> accessed 20 March 2023.

[162]See eg, CSRD (n 161) Recital 3.

[163]Eg J Mähönen, 'Auditors' Role in Corporate Governance' in HS Birkmose et al (eds), *Instruments of EU Corporate Governance: Effecting Changes in the Management of Companies in a Changing World* (Kluwer Law International 2023).

[164]CSRD (n 161) Recital 11.

[165]Ibid., Art 2(b)(17)–(18), referencing also the SFDR, Art 2(18).

[166]Ibid., Art 1(4), amending Art 19a of Directive 2013/34/EU.

[167]ESG is short for Environmental, Social, and Governance. For the origins of the term, see E Pollman, 'The Making and Meaning of ESG' (31 October 2022), European Corporate Governance Institute - Law Working Paper No. 659/2022, <https://ssrn.com/abstract=4219857> accessed 5 November 2022. Regarding 'ESG hushing', see M Joselow, '"Greenhushing": Why Some Companies Quietly Hide Their Climate Pledges' *Washington Post* (19 July 2023) <https://www.washingtonpost.com/climate-environment/2023/07/13/greenhushing-climate-trend-corporations/> accessed 4 January 2024; T Shimizuishi et al, 'ESG Themes to Watch in 2023' *Financial Times* (4 January 2023) <https://www.ft.com/content/e8b319c4-5231-426a-95dc-310053e41db1> accessed 4 January 2024.

[168]H Jones, 'EU Confirms Watering down of Corporate Sustainability Disclosures' *Reuters* (1 August 2023) <https://www.reuters.com/sustainability/eu-finalises-new-corporate-sustainability-disclosure-rules-2023-07-31/> accessed 29 November 2023.

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TNFD strongly influencing the European Sustainability Reporting Standards,[169] the weaknesses of these business-driven initiatives are integrated directly into EU law. There is no 'safe and just' understanding of sustainability informing this stream of legislation. References are made to various aspects of environmental and societal issues in a fragmented and incoherent manner. There is a (limited) inclusion of the OECD Guidelines and UNGPs, and international human rights and labour law, in the CSRD and ESRS as we saw above in the Taxonomy and SFDR. This is unprecedented, and can be seen as seeds for change, yet it is far from sufficient. Consistently, mitigating financial and corporate risks of environmental issues, and notably climate change, is prioritised. All of these instruments rely on disclosure. Alone, disclosure as a regulatory tool is clearly insufficient to shift business towards sustainability.[170]

Finally opening up for sustainability-oriented action on core company law issues, the Sustainable Finance initiative indicated a role for legislative intervention in the rules concerning corporate boards.[171] Reinforced by the EU Green Deal's statements that *'sustainability should be further embedded into the corporate governance framework'*,[172] the Commission launched its Sustainable Corporate Governance initiative in 2020.[173] Its goal was to change company law and corporate governance to promote long-term creation of sustainable value.[174]

However, the Sustainable Corporate Governance initiative was constrained through very strong resistance from business lobbyists and some academics.[175] The Commission's originally more ambitious proposal was stopped twice by the Commission's own Regulatory Scrutiny Board after intense lobbying[176] – to the extent that the European Ombudsman has opened an investigation into the Regulatory Scrutiny Board.[177] The Commission eventually put forward its proposal in February 2022 for a Corporate Sustainability Due Diligence Directive.[178] Due diligence was the one aspect of its undoubtedly broader reform programme that the Commission felt it had support for, with the mainly environmental focus of the Sustainable Finance Initiative merging with the push for mandatory human rights due diligence, informed by the UN Guiding Principles, supported by the European Parliament and a range of national legislative initiatives.[179]

[169]See, for example, EFRAG's conversion table between TCFD recommendations and draft European Sustainability Reporting Standards <https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FSiteAssets%2FED_ESRS_AP4.pdf> accessed 6 March 2024.

[170]Eg, M Bowman and D Wiseman, 'Finance Actors and Climate-Related Disclosure Regulation: Logic, Limits, and Emerging Accountability' in C Holley, L Phelan and C Shearing (eds), *Criminology and Climate* (Routledge 2020); A Johnston and B Sjåfjell, 'The EU's Approach to Environmentally Sustainable Business: Can Disclosure Overcome the Failings of Shareholder Primacy?', in M Peeters and M Eliantonio (eds) *Research Handbook on EU Environmental Law* (Edward Elgar Publishing 2020).

[171]Action Plan on Financing Sustainable Growth (2018) (n 114) Section 4.2 Action Point 10.

[172]The European Green Deal. COM/2019/640 Final' (n 111) Section 2.2.1.

[173]European Commission, 'Sustainable Corporate Governance Initiative' (2020) European Commission <https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12548-Sustainable-corporate-governance_en> accessed 14 August 2024.

[174]Ibid.

[175]J-O Jacke et al, 'Letter: Brussels' Sustainable Corporate Governance Plan Is Flawed' *Financial Times* (22 April 2021) <https://www.ft.com/content/a2ab26b3-c9fc-4f33-a4bf-96a6e136f890> accessed 14 August 2024; MJ Roe et al, 'The European Commission's Sustainable Corporate Governance Report: A Critique' (14 October 2020), European Corporate Governance Institute - Law Working Paper 553/2020, <https://ssrn.com/abstract=3711652> accessed 20 March 2023.

[176]Corporate Europe Observatory 'Inside Job: How Business Lobbyists Used the Commission's Scrutiny Procedures to Weaken Human Rights and Environmental Legislation' (*Corporate Europe Observatory*, 8 June 2022) <https://corporateeurope.org/en/inside-job> accessed 10 June 2022.

[177]European Ombudsman, *The Composition of the European Commission's Regulatory Scrutiny Board and How It Interacts with Interest Representatives: Case Opened* (European Ombudsman 2023) <https://www.ombudsman.europa.eu/en/opening-summary/en/168093> accessed 4 January 2024.

[178]European Commission, 'Proposal for a Directive of the European Parliament and of the Council on Corporate Sustainability Due Diligence and Amending Directive (EU) 2019/1937' (COM/2022/71 final), 23.2.2022.

[179]S Deva, 'Mandatory Human Rights Due Diligence Laws in Europe: A Mirage for Rightsholders?' 36 (2023) Leiden Journal of International Law 389; L Smit et al, 'Study on Due Diligence Requirements through the Supply Chain: Final Report.'

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Further, reporting on due diligence was already included in the CSRD and expected under the 'minimum safeguards' and 'do no significant harm' requirements of the Taxonomy and the SFDR, respectively.

In spite of the political consensus achieved between Member States and the European Parliament in December 2023, the road towards adoption of the Corporate Sustainability Due Diligence Directive was to become even more rocky.[180] After months of uncertainty and horse-trading amongst Member States, the Directive was adopted with a much reduced scope in terms of companies included in June 2024.

The Corporate Sustainability Due Diligence Directive (CSDDD)[181] is a legislative instrument that is very much on the defensive, with 'corporate sustainability' left undefined but in practice limited to those elements that can be traced back to the mainly international environmental and human rights legal instruments. The CSDDD does not engage with planetary boundaries nor have any kind of references aligned with the safe and just framework. Its engagement with social issues is limited; it does not include fair taxation and anti-corruption. And yet, indicating the tension in social norms and the emerging potential for change, some positive changes were included in the final version thanks to extensive support by civil society, academics, and businesses.[182] There are more detailed rules on the due diligence and its follow-up, with a firming up of the corporate sustainability requirements.[183] The price, however, was a much reduced scope of the CSDDD. Even the limited and flawed company law attempt at integrating sustainability issues into the role of the corporate board was left out.

The shareholder primacy drive explains the strong resistance to the Sustainable Corporate Governance initiative, the difficulty of getting the CSDDD into place, and the strong reaction to any indication of reforming EU company law. With its simplistic approach to measuring 'good' business governance through the maximisation of returns for investors, the shareholder primacy drive provides very receptive ground for the limiting ideas of governing for sustainability through quantified goal-settings and assessments. It also connects to entrenched macro-level economic efficiency ideas using economic growth (as GDP) as a measurement of the success of a nation state, with its deeply constraining effects for transformation.

With shareholder primacy opponents framing the discussion as a choice between shareholder primacy and an often vague and poorly defined stakeholder theory, company law proper, as the regulatory infrastructure for business, is left out of the debate.[184] This has proved to be a powerful

(2020) Publications Office of the European Union <http://op.europa.eu/en/publication-detail/-/publication/8ba0a8fd-4c83-11ea-b8b7-01aa75ed71a1/language-en> accessed 8 December 2020.

[180]B Sjåfjell and J Mähönen, 'The Corporate Sustainability Due Diligence Directive in Jeopardy' (*Blogging for Sustainability*, 5 February 2024) <https://www.jus.uio.no/english/research/areas/sustainabilitylaw/blog/2024/corporate-sustainability-due-diligence.html> accessed 6 March 2024.

[181]Directive (EU) 2024/1760 of the European Parliament and of the Council of 13 June 2024 on Corporate Sustainability Due Diligence and Amending Directive (EU) 2019/1937 and Regulation (EU) 2023/2859Text with EEA Relevance OJ L, 2024/1760.

[182]Business & Human Rights Resource Centre, *EU: Over 220 CSOs Call for Proposed Corporate Sustainability Due Diligence Law to Be Strengthened* (Business & Human Rights Resource Centre, 11 May 2022) <https://www.business-humanrights.org/en/latest-news/eu-over-220-csos-call-for-proposed-corporate-sustainability-due-diligence-law-to-be-strengthened/> accessed 11 May 2022; OECD Watch, *Achieving Alignment: Synching EU Due Diligence Legislation with the Updated OECD Guidelines* (OECD Watch 2023) <https://www.oecdwatch.org/achieving-alignment-synching-eu-due-diligence-legislation-with-the-updated-oecd-guidelines/> accessed 10 August 2023; UNICEF, 'Joint Statement by UNDP, UNEP, UNICEF and OHCHR on the EU Corporate Sustainability Due Diligence Directive' (2024) <https://www.unicef.org/eu/press-releases/joint-statement-undp-unep-unicef-and-ohchr-eu-corporate-sustainability-due-diligence> accessed 19 February 2024.

[183]For an early analysis of the adopted text from a business and human rights perspective, see N Bueno et al, 'The EU Directive on Corporate Sustainability Due Diligence (CSDDD): The Final Political Compromise' (2024) Business and Human Rights Journal 1.

[184]B Sjåfjell and J Mähönen, 'Corporate Purpose and the Misleading Shareholder vs Stakeholder Dichotomy' 24 (2024) Bond Law Review 69.

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way of constraining the discussion, and negating the possibility for the Commission to propose a meaningful company law reform.

In light of all this, the final adoption of the CSDDD with some strengthening of the due diligence rules is an important step towards more sustainability-oriented business law. With its now more explicit connection to the UNGPs and the OECD Guidelines,[185] the CSDDD has the potential to be a hard-law basis for the argument of corporate sustainability due diligence emerging into a horizontal norm for business. Nevertheless, what it requires is due diligence – it could have explicitly mandated corporate sustainability, eg, through integrating research-based sustainable value requirements in the duties of the board.[186]

The fact that the processes towards the Corporate Sustainability *Reporting* Directive and the Corporate Sustainability *Due Diligence* Directive were undertaken by separate Directorates-General (DGs) in the Commission is symptomatic of the stronger emphasis on finance. The CSRD, under DG Finance,[187] was adopted without much controversy, and is aligned with the Sustainable Finance initiative's emphasis on mitigating risks and relying on disclosure as a legislative tool. The process towards the CSDDD, under DG Just,[188] was one that sought to promote actual change and facilitate sustainable value creation, and it was supported by civil society rather than being informed by a financial risks approach. As a result, it was extremely difficult to get into place. It also illustrates that reporting remains the preferred compromise solution between those who wish to continue with business as usual and those supporting the transformation towards sustainable business. Rather than taking the opportunity to close the chasm between accounting rules on reporting and company law rules on the corporate board,[189] Directorates-General still operate in silos and corporate capture continues to undermine efforts for sustainability-oriented legislation.

Unsustainable linear ('take-make-waste') business models are based on overproduction and overconsumption. The EU's Circular Economy initiatives (under yet another Directorate-General, DG Environment[190]) seek to regulate products from the design phase onwards to promote more circular business models.[191] In 2022, the Sustainable Products Policy was launched, with ambitious plans for expanding the eco-design requirements for certain products, including household appliances, to products more generally, including textiles.[192] Integrating sustainability into

[185]Eg, CSDDD (n 181) Recital 14: 'This Directive is consistent with the joint communication of the Commission on the EU Action Plan on Human Rights and Democracy 2020-2024. That action plan defines as a priority strengthening the Union's engagement to actively promote the global implementation of the UN Guiding Principles and other relevant international guidelines such as the [OECD] Guidelines, including by advancing relevant due diligence standards.' See also Recital 37 with its reference to the UNGPs as giving guidance, and Recital 62, connecting to the UNGPs and the OECD Guidelines, and referring to the CSRD and the SFDR.

[186]B Sjåfjell, 'A General Corporate Law Duty to Act Sustainably' in HS Birkmose et al (eds), *Instruments of EU Corporate Governance: Effecting Changes in the Management of Companies in a Changing World* (Kluwer Law International 2023) Ch. 3.

[187]European Commission, 'Achievements & milestones 2019–2024' <https://finance.ec.europa.eu/index_en> accessed 14 August 2024.

[188]European Commission, 'Justice and Consumers' <https://commission.europa.eu/about-european-commission/departments-and-executive-agencies/justice-and-consumers_en> accessed 14 August 2024.

[189]Sjåfjell, 'Reforming EU Company Law to Secure the Future of European Business' (n 129); Sjåfjell and Mähönen (n 184).

[190]European Commission, 'Environment' <https://commission.europa.eu/about-european-commission/departments-and-executive-agencies/environment_en> accessed 14 August 2024.

[191]EEA, *Conditions and Pathways for Sustainable and Circular Consumption in Europe* (European Environment Agency 2023) Briefing No. 11/2023 <https://www.eea.europa.eu/publications/conditions-and-pathways-for-sustainable/conditions-and-pathways-for-sustainable>; European Commission, 'Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. A New Circular Economy Action Plan for a Cleaner and More Competitive Europe' (2020) COM/2020/98 final <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1583933814386&uri=COM:2020:98:FIN> accessed 30 November 2022.

[192]European Commission, 'Sustainable Product Policy & Ecodesign' (2022) European Commission <https://single-market-economy.ec.europa.eu/industry/sustainability/sustainable-product-policy-ecodesign_en> accessed 15 August 2024.

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product design has the potential to change the core of business models. However, the emphasis in the Circular Economy initiative remains on economic efficiency in the form of more efficient resource use, rather than aiming for sufficiency, informed by the need for absolute reductions in production and consumption.[193] The Circular Economy initiative does not fully integrate the recognition of the limits of our planet, in spite of references to planetary boundaries in the Circular Economy Action Plan of 2020, nor does it encompass social and governance aspects of sustainability.[194] Indeed, the Ecodesign Regulation for Sustainable Products[195] postpones until 2028 the assessment of whether social issues should also be included.[196] This shows that the Circular Economy initiative continues on the path of economic efficiency-based 'greening' rather than transforming the current economy.

The research-based concept of sustainability we have outlined, and notably the planetary boundaries framework, is referred to in several EU policy documents informing environmental legislative initiatives. International human rights law, the recognised minimum basis for social foundations, together with the internationally endorsed social norms of the OECD Guidelines and the UNGPs, is being included in EU finance and business law in an unprecedented way. Yet, this is also being done in a very reticent way. Common for the adopted legislative initiatives outlined above, is that they do not properly engage with any meaningful conceptualisation of sustainability. The disconnect between the Circular Economy initiative, the Sustainable Corporate Governance initiative, and the Sustainable Finance initiative reveals how they are shaped by somewhat different rationales, while they all are informed by the illusion of green growth and the emphasis on economic efficiency. The initiatives discussed in this section further illustrate the EU's emphasis on the largest business entities and their belief in the transformative power of financial markets.[197] They exclude most SMEs.[198] This is based on a misconception, promoted by business lobbyists, that regulating for sustainability entails burdens and costs only. Yet, achieving a 'Just Transition' entails securing a level playing field and legal certainty for sustainability-oriented businesses, channelling the potential of entrepreneurship across Member States, and dedicating sufficient resources to facilitating the sustainability transition of all European businesses.[198] It also, crucially, entails regulating for a fundamental transformation, where securing the ecological basis for human prosperity on this planet, and the bases for good lives for people everywhere, is prioritised above the interests of financial and corporate actors. Financial and economic goals can meaningfully only be regarded as instrumental goals.

[193]Maitre-Ekern (n 73).

[194]E Maitre-Ekern et al, 'Towards a Sustainable Circular Economy: SMART Reform Proposals' (8 May 2020) University of Oslo Faculty of Law Research Paper No. 2020-12 <https://ssrn.com/abstract=3596076> accessed 22 November 2020.

[195]Regulation (EU) 2024/1781 of the European Parliament and of the Council of 13 June 2024 Establishing a Framework for the Setting of Ecodesign Requirements for Sustainable Products, Amending Directive (EU) 2020/1828 and Regulation (EU) 2023/1542 and Repealing Directive 2009/125/EC (Text with EEA Relevance) OJ L, 2024/1781.

[196]Ibid., Art 75(4).

[197]J Cullen et al, 'Financing Sustainable Value Creation' in B Sjåfjell, C Villiers and G Tsagas (eds), *Sustainable Value Creation in the European Union: Towards Pathways to a Sustainable Future through Crises* (Cambridge University Press 2023).

[198]J Mähönen and T Pilhajarinne, 'Innovations and Small and Medium-Sized Enterprises for Sustainability and the Circular Economy' in O-A Rognstad et al (eds), *Promoting Sustainable Innovation and the Circular Economy. Legal and Economic Aspects* (Routledge 2024) Ch. 2.

[199]A Palinska, 'Joint Statement – European Parliament Leaves SMEs out of CSRD Scope | Finance Watch' (*Finance Watch*, 16 March 2022) <https://www.finance-watch.org/publication/european-parliament-leaves-smes-out-of-csrd-scope/> accessed 18 March 2022; B Sjåfjell et al, 'Securing the Future of European Business: SMART Reform Proposals' (7 May 2020) University of Oslo Faculty of Law Research Paper No. 2020-11 <https://ssrn.com/abstract=3595048> accessed 22 November 2020; F West, 'On Mandatory Due Diligence, SMEs Don't Need a Free Pass; They Need Flexibility' (*Shift*, 20 November 2020) <https://shiftproject.org/smes-mhrdd/> accessed 15 December 2020.

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C. The EU's fixation on growth and finance derails its sustainability efforts

The EU's attempts at regulating business for sustainability are historically and globally unprecedented, and yet they are fundamentally insufficient. Its policies appear to be informed by the conviction that continued pursuit of economic growth as a macro goal, reflected in business as the maximisation of returns for shareholders as a micro goal, is necessary and possible. That economic growth explains human prosperity historically and is necessary for continued progress is increasingly called into doubt.[200] The justification for continuing with 'business as usual', that negative environmental impacts can be completely decoupled from economic activities, does not have empirical support.[201] Likewise, the assumptions underpinning the idea that maximising returns for investors increases social welfare have been disproven.[202] Yet, these postulates continue to constrain political imagination and negate any truly transformational proposals. Prioritising economic growth and financial interests is contrary to a comprehensive approach to sustainability that recognises the inextricable interconnectedness of environmental, social and governance aspects. When the complex, interconnected and dynamic nature of sustainability is simplistically broken down to separate, fixed and 'objectively' determinable performance targets and indicators, unavoidable tensions are concealed, and misleading approaches continue to inform policies.

How could a regulatory framework for business governance for sustainability then be shaped to navigate the tensions and mitigate the dangers of oversimplification arising from these dominant science–business–policy interactions? A starting point is to understand corporate sustainability as being about the contribution of business to global sustainability, taking this contribution seriously, and recognising that the ever-present tensions cannot be simplified away through narrowly selective quantifications and disclosures. This also entails not expecting or waiting for globally quantified science-based targets for all aspects of sustainability. Regulating for sustainable business governance means finding a balance between being flexible and open enough to facilitate the innovative creation of value in each business (because corporate sustainability cannot be achieved through top-down planning of everything), while being firm enough on the goals and processes to shift business away from the unsustainable path-dependent trajectory of business as usual on to a more sustainable direction. Crucially, such a regulatory framework will need to include thoughtful process-oriented rules to facilitate the open, inclusive and participatory processes that must be a part of the governance of globalised business.[203]

Actual progress requires a new and much stronger emphasis on policy coherence for sustainability, informed by a richer research-based understanding of sustainability, and a transformation of the current relationship between economic growth and sustainability in EU policies. The continued silo-thinking and divide between EU policy areas is evident in that the EU Green Deal and in the Sustainable Finance initiative make no mention of planetary boundaries, or any ecological limits at all. They reveal very little concern for human beings, especially those outside of the EU. The emphasis is on mitigating financial risks and, still, on economic growth as an overarching goal. Dethroning economic growth is not in contradiction with the instrumental aim of securing a resilient business and financial system that recognises the limits of our planet and provides the economic basis for achieving social goals. Indeed, an overly strong focus on growth puts the economy at risk, with potential negative impacts on financial stability and the possibility of a stable basis for continued social wellbeing in Europe and abroad.

[200] J Hickel, *Less Is More* (Penguin Random House 2020) 171–5; Raworth, *Doughnut Economics* (n 14).
[201] Parrique et al (n 119).
[202] Bruner and Sjåfjell (n 65); Sjåfjell et al (n 65); Stout (n 65).
[203] Sjåfjell, 'A General Corporate Law Duty to Act Sustainably' (n 186).

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5. Concluding reflections

The globally systemic risks of continuing on an unsustainable path of business as usual are enormous, and they are coming under increasing attention by science, policy, business and society at large. As the 2030 Agenda indicates, the possibilities for securing good lives and sustainable prosperity are enormous too. However, current initiatives by business and by the EU do not facilitate opportunities for actual transformation towards sustainability. This is a governance problem that neither law, nor business, nor science, can fix separately. And yet some of the ways these aspects are being brought together generate tensions and undermine the integration of sustainability into governance at large, and into corporate governance in particular.

A research-based understanding of sustainability, obtained through deep involvement of scholarship across relevant domains, belongs at the heart of an adaptive, responsive system for sustainable corporate governance. A too-narrow engagement of global change scientists with business actors and policymakers contributes to risks and the perpetuation of injustices. We call for broader engagement in the research-based conceptualisation of sustainability as a safe and just space, for processes and salient content with scientific credibility and societal and political legitimacy.

Multiple dimensions of social and biophysical change need to be tracked and responded to; the extreme unsustainabilities of our time cannot be mitigated through simplistic emphasis on quantifiable measurements of progress. Mitigating pressures on planetary boundaries and securing social foundations worldwide demands responding to unequal resource consumption levels and differentiated impacts of environmental changes on human wellbeing, whether these arise from intrinsic differences in cultures and geographic contexts or are the consequence of problematic economic decisions and institutions. The alternative is that risks of unsustainability continue to materialise, undermining the basis for business as it will for well-functioning societies.

Both 'sustainable value creation' and 'sustainability risks' are potential drivers for change, signalling a shift away from the policy and business fixation on the maximisation of returns to investors. However, as long as these concepts continue to be understood and used as attempts at greening the current system, they will remain insufficient. Creating sustainable value requires that business actually engages with the complexity of achieving a safe and just space. Equally, understanding and responding to risks of unsustainability requires a fundamental transformation of the way globalised business operates. Decision-makers in business today cannot rely on merely deploying science-based targets generated from science–business platforms and fulfilling disclosure requirements from policymakers.

Transitioning towards global sustainability requires radically more innovative responses from business, adaptive and truly sustainability-oriented leadership from policymakers, and critically reflexive responses from sustainability scholars. With the proliferation of multi-actor platforms, task forces, networks and coalitions, opportunities exist for these responses to be underpinned by transdisciplinary dialogues about what a sustainable future is and what the pathways towards it entail. Academia's inputs should be through open and inclusive discussions informed by diverse research-based insights, not through an exclusionary science-based approach. The aim of a safe and just space for humanity, the recognition of how far world's societies are from achieving this aim, and the urgent need to shift onto pathways that can give hope for current and future generations must be the starting premise for these conversations.

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