COMMENTS

IN THE CLAMOR ABOUT CLIMATE CHANGE, DON'T IGNORE NATURAL CAPITAL

by Austin Pierce

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Climate change has captured the attention of governments, regulators, international bodies, and the private sector. But climate change is arguably a single facet of a larger concern: the "rapid decline" in the integrity of nature.[1]

Climate and other natural systems are interconnected, and recent literature has focused increasingly on this "interdependence of climate, ecosystems, and biodiversity,"[2] spurring a wide variety of organizations to reflect on the broader role nature plays in environmental sustainability. The scientific discussion has triggered multiple stakeholders—including standards agencies, policymakers, and multinational financial institutions—to develop initiatives that reflect lessons learned from the climate playbook. Increased focus on natural capital has important implications for companies as they continue to develop their environmental, social, and governance (ESG) functions.

This Comment traces the growth of interest in natural capital, recent developments in nature-related initiatives, and opportunities for companies across multiple industries to prepare for increased scrutiny of their impacts on, and exposure to, nature.

I. Natural Capital: A Primer on the Who, What, and Why

"Natural capital" refers to the environmental and natural resources that provide benefits to people. It includes traditional resources, such as water and organisms from which humanity derives products (e.g., timber); the myriad other living and nonliving components of the earth; and natural complexes, such as ecosystems and biodiversity, which also contribute to benefit flows.

This incredibly large scope may be a key reason why natural capital has not received the same degree of focus as climate change. While the United Nations (U.N.) Framework Convention on Climate Change and the Convention on Biological Diversity (CBD) were developed in parallel,[3] and have roughly the same number of Parties, the actions of the CBD have received significantly less attention and fanfare.[4] However, over the past few years, scientific discussions, government action, and private-sector efforts have developed considerably. Each is discussed in detail below.

A. *The Status of Scientific Discussion*

While the academic community regularly discusses topics including ecosystem resiliency and biodiversity, two reports published in 2021 sounded alarm bells for the policy arena: the Dasgupta Review and the Organisation for Economic Co-operation and Development (OECD) Environmental Policy Paper on Biodiversity, Natural Capital, and the Economy (OECD Report). The United Kingdom, which at the time held the Group of Seven (G7) presidency, commissioned both reports.

1. The Dasgupta Review

The Dasgupta Review notes that nature's ability to support the quality of human life across a variety of channels has significantly decreased.[5] The review contends that this decline is in significant part because models of economic

1. *See Summary for Policymakers*, *in* The Global Assessment Report on Biodiversity and Ecosystem Services 11 (Sandra Díaz et al. eds., Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services 2019), https://ipbes.net/global-assessment.
2. Intergovernmental Panel on Climate Change, Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change 7 (Hans-Otto Pörtner et al. eds., 2022).
3. *Compare* Convention on Biological Diversity, *opened for signature* June 5, 1992, 1760 U.N.T.S. 79, https://treaties.un.org/doc/Treaties/1992/06/19920605%2008-44%20PM/Ch_XXVII_08p.pdf, *with* U.N. Framework Convention on Climate Change, May 9, 1992, S. Treaty Doc. No. 102-38, 1771 U.N.T.S. 107, https://treaties.un.org/doc/Treaties/1994/03/19940321%2004-56%20AM/Ch_XXVII_07p.pdf.
4. *See, e.g.*, Pierre Legagneux et al., *Our House Is Burning: Discrepancy in Climate Change vs. Biodiversity Coverage in the Media as Compared to Scientific Literature*, 5 Frontiers Ecology & Evolution art. 175, https://www.frontiersin.org/articles/10.3389/fevo.2017.00175/full.
5. Partha Dasgupta, The Economics of Biodiversity: The Dasgupta Review 111 (2021), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf.

growth have focused on produced capital and human capital, often at the expense of natural capital.[6] Further, the Dasgupta Review argues that treatment of natural capital as an afterthought is a "fundamental misconception" in economic models because the global economy is embedded in nature, and thus constrained by the same bounds.[7]

2. The OECD Report

The OECD Report acknowledges the findings of the Dasgupta Review, and identifies biodiversity loss "among the top global risks to society."[8] It then develops policy recommendations for moving natural capital into the mainstream for both the public and private sectors. For example, the OECD Report recommends that governments (1) support comprehensive natural capital accounts to complement data on countries' traditional economic performance metrics; and (2) pursue policy levers to promote a coherent national vision for biodiversity, including incorporating that vision into existing plans regarding, for example, economic development or climate change.[9] The OECD Report also discusses the need for private-sector action—with particular focus on the financial sector—recommending the incorporation of biodiversity into due diligence, risk management, and disclosure.[10]

B. Regulators' Responses

Policymakers have taken notice, and made several strides toward more substantial regulations regarding natural capital. As of the U.N. Environment Programme's 2018 survey, more than 130 countries had published strategic action plans on biodiversity with some form of distinct legal measures.[11] Some countries, such as Japan and South Africa, had preexisting laws requiring frameworks for biodiversity management and stewardship that have been leveraged for increasingly ambitious initiatives.[12] Other countries, including France, have amended existing laws relating primarily to climate and the energy transition to also address natural capital considerations, like biodiversity.[13]

Other jurisdictions have pursued additional laws and policies regarding natural capital protections and disclosures. For example, the European Union's (EU's) 2020 Taxonomy Regulation includes "restoration of biodiversity and ecosystems" among the six environmental sustainability objectives that economic activities must consider in order to be deemed sustainable.[14] The EU has also proposed a directive to enhance companies' sustainability disclosures on natural capital,[15] as well as regulation to improve the quality of terrestrial, coastal, and freshwater ecosystems within Member States' sovereign control.[16] And in April 2022, the United States announced a series of nature-related policies, including the launch of a national nature assessment, paralleling the government's prior national climate assessments; the launch of a natural capital account, to develop performance metrics for nature that are not captured in economic performance models; and accelerated use of nature-based solutions for various issues.[17]

Internationally, the CBD provides the overarching framework for international cooperation on biodiversity issues. Although the United States remains a notable holdout from ratification, 196 countries are Parties to the agreement.[18] The CBD is governed by decadal frameworks agreed upon by Parties to the convention, with the last strategic plan (2011-2020) resulting in the Aichi Targets.

The Aichi Targets introduced ambitions for several strategic goals and conservation targets that have now evolved into the global "30 by 30" initiative (i.e., to conserve 30% of global land and ocean area by 2030).[19] In December

6. *Id.* at 112-14, 121.
7. *Id.* at 130. *See also id.* at 118-21, 126-27, 137-43.
8. OECD, Biodiversity, Natural Capital, and the Economy: A Policy Guide for Finance, Economic, and Environment Ministers 6, 11 (2021), https://www.oecd-ilibrary.org/environment/biodiversity-natural-capital-and-the-economy_1a1ae114-en.
9. *Id.* at 18-19, 32.
10. *Id.* at 40-44.
11. U.N. Environment Programme, Law and National Biodiversity Strategies and Action Plans 68-69 (2018), https://wedocs.unep.org/bitstream/handle/20.500.11822/25655/LawBiodiversity_Strategies.pdf.
12. *Compare* Basic Act on Biodiversity, Act No. 58 of 2008, https://www.japaneselawtranslation.go.jp/en/laws/view/3892/en#je_ch2at1 (Japan), *and* National Environmental Management: Biodiversity Act 10 of 2004, https://www.gov.za/sites/default/files/gcis_document/201409/a10-04.pdf (S. Afr.), *with* The National Biodiversity Strategy of Japan 2012-2020 (2012), http://extwprlegs1.fao.org/docs/pdf/jap158265.pdf, *and* Japan Ministry of the Environment, *30 by 30*, https://policies.env.go.jp/nature/biodiversity/30by30alliance/ (last visited Dec. 8, 2022), *and* South Africa Department of Environment, Forestry, and Fisheries, South Africa's National Biodiversity Framework 2019-2024 (2021), https://www.dffe.gov.za/sites/default/files/gazetted_notices/nemba_revisednational_biodiversityframework_g44229gon171.pdf.
13. *See, e.g.*, Loi n° 2019-1147 du 8 novembre 2019 relative à l'énergie et au climat [Law 2019-1147 of November 8, 2019, on Energy and Climate], Journal Officiel de la République Française [J.O.] [Official Gazette of France], Nov. 9, 2019, art. 29, https://www.legifrance.gouv.fr/jorf/article_jo/JORFARTI000039355992.
14. 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, arts. 3, 9, 15, 17, 2020 O.J. (L 198), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32020R0852.
15. *See Proposal for a Directive of the European Parliament and of the Council Amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC, and Regulation (EU) No 537/2014, as Regards Corporate Sustainability Reporting*, at art. 1(4), COM(2021) 189 final (Apr. 21, 2021), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0189 (discussing sustainability reporting standards including information on "biodiversity and ecosystems," taking into account, among other things, "existing standards and frameworks for natural capital accounting").
16. *See Proposal for a Regulation of the European Parliament and of the Council on Nature Restoration*, COM(2022) 304 final (June 22, 2022), https://environment.ec.europa.eu/system/files/2022-06/Proposal%20for%20a%20Regulation%20on%20nature%20restoration.pdf.
17. *Accounting for Nature on Earth Day 2022*, White House (Apr. 24, 2022), https://www.whitehouse.gov/ostp/news-updates/2022/04/24/accounting-for-nature-on-earth-day-2022/.
18. CBD, *List of Parties*, https://www.cbd.int/information/parties.shtml (last visited Dec. 8, 2022).
19. *Compare* Aichi Biodiversity Target 11 found at Secretariat of the CBD, Strategic Plan for Biodiversity 2011-2020 and the Aichi Targets, https://www.cbd.int/doc/strategic-plan/2011-2020/Aichi-Targets-EN.pdf, *with* High Ambition Coalition for Nature and People, *Why 30x30?*, https://www.hacfornatureandpeople.org/why-30x30 (last visited Dec. 8, 2022), *and* Target 3 of CBD, *First Draft of the Post-2020 Global Biodiversity Framework*, ¶ 12(1), U.N. Doc. CBD/WG2020/3/3 (July 5, 2021), https://www.

2022, the parties to the CBD adopted the Kunming-Montreal Global Biodiversity Framework, establishing both long-term (2050) goals and intervening (2030) milestones.[20] Other initiatives exist, including the High Ambition Coalition for Nature and People, which advocated for the global adoption of the 30 by 30 initiative.

Among these other developments, the G7's response, however, carries significant weight, given the outsized role that Members' economies play in the global arena. In a communiqué from the 2021 G7 summit, Member States endorsed mandatory climate disclosure (in line with the Task Force on Climate-Related Financial Disclosures, or TCFD) in the same breath as giving their support for various natural capital initiatives, including the Taskforce on Nature-Related Financial Disclosures (TNFD), the Dasgupta Review, and the OECD Report.[21]

The G7 also issued a 2030 Nature Compact, recognizing the interaction between climate change and biodiversity and committing to "the global mission to halt and reverse biodiversity loss by 2030."[22] Following the 2022 summit, the G7 Leaders' Communiqué reaffirmed support for the TNFD, commitment to "30 by 30" goals at both the national and global levels, ecological restoration efforts, and emphasis on the mutually reinforcing nature of climate and natural capital issues.[23]

C. Private-Sector Initiatives

The private sector has established parallel initiatives to help facilitate the uptake of natural capital considerations. Major initiatives are summarized below in Appendix A. However, two initiatives merit special emphasis in this discussion, as they are clear parallels to institutions that proved effective in the climate change arena: (1) the TNFD, as a parallel to the TCFD, and (2) the Science Based Targets Network (SBTN), as an extension beyond the Science Based Targets initiative's (SBTi's) focus on climate.

1. TNFD

Established in 2020, the TNFD's mission is to develop a risk management and disclosure framework for nature-related risks, "with the ultimate aim of supporting a shift in global financial flows away from nature-negative outcomes and toward nature-positive outcomes."[24] As with the TCFD, the efforts are industry-led, with representatives from financial institutions, public companies in multiple sectors, and market service providers.

The TNFD is developing recommendations over the course of several beta drafts, and released the third version in November 2022.[25] These recommendations follow much of the structure of the TCFD, including elaborating a general risk taxonomy, incorporating both risk and opportunity into the dialogue around nature, and providing high-level disclosure recommendations under the four pillars of governance, strategy, risk management, and metrics and targets. Many of these recommendations parallel those from the TCFD, recast to discuss nature-related considerations.

However, the TNFD also introduces a few additional concepts into the disclosure recommendation framework. As of beta version 0.3, the recommended disclosures were as shown in Figure 1 on the next page.

The TNFD also provides guidance to help with the processes associated with these disclosures. For example, because nature is a broader, more varied topic than climate, the TNFD introduces recommended metrics for a wide variety of natural aspects (e.g., land use, pollution across various environmental media, invasive species, ecosystem extent and integrity, status of ecosystem services, etc.). The framework also introduces a prototype approach for nature-related risk and opportunity assessment, using the acronym LEAP, which includes four phases:

1. **LOCATE** your interface with nature: What is the organization's direct and value chain business footprint? What biomes/ecosystems does this footprint interface with and what are their current levels of integrity and importance? Which are priority locations (i.e., those that would relate to Strategy Recommendation D)? And what business units, asset classes, value chains, and so on are interfacing at these priority locations?
2. **EVALUATE** your dependencies and impacts: What are the business activities at each priority location? What environmental assets and services do they depend upon or impact, and what are those dependencies/impacts? What is the magnitude (size and scale) of those dependencies and impacts?
3. **ASSESS** your risks and opportunities: What are the corresponding risks to the organization? What existing risk management approaches are already being applied? What additional risk management actions should be considered? Which

cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf. *See also* Eric Dinerstein et al., *A Global Deal for Nature: Guiding Principles, Milestones, and Targets*, 5 Sci. Advances (2019), https://www.science.org/doi/10.1126/sciadv.aaw2869.

20. CBD, *Kunming-Montreal Global Biodiversity Framework*, U.N. Doc. CBD/COP/15/L.25 (Dec. 18, 2022), https://www.cbd.int/doc/c/e6d3/cd1d/daf663719a03902a9b116c34/cop-15-l-25-en.pdf.
21. For more information on this communiqué in context, see Austin Pierce, *The G7 Gambit: Endorsing Disclosure Requirements for Climate. And More?*, Corp Gov (July 2021), https://corpgov.com/the-g7-gambit-endorsing-disclosure-requirements-for-climate-and-more/.
22. G7, 2030 Nature Compact (2021), https://www.gov.uk/government/publications/g7-2030-nature-compact/g7-2030-nature-compact.
23. G7, G7 Leaders' Communiqué (2022), https://www.consilium.europa.eu/media/57555/2022-06-28-leaders-communique-data.pdf.
24. TNFD, *About*, https://tnfd.global/about/ (last visited Dec. 8, 2022).
25. TNFD, The TNFD Nature-Related Risk and Opportunity Management and Disclosure Framework Version 0.1, https://tnfd.global/wp-content/uploads/2022/03/220315-TNFD-beta-v0.1-full-report-FINAL.pdf; Version 0.2, https://framework.tnfd.global/wp-content/uploads/2022/06/TNFD-Framework-Document-Beta-v0-2.pdf; Version 0.3, https://framework.tnfd.global/wp-content/uploads/2022/11/TNFD_Management_and_Disclosure_Framework_v0-3_B.pdf.

Figure 1. Draft Recommendations From TNFD Beta v0.3 Release

TNFD Nature-related Disclosure Recommendations (v0.3)

Governance	Strategy	Risk & Impact Management	Metrics & Targets
Disclose the organization's governance around nature-related dependencies, impacts, risks & opportunities.	Disclose the actual and potential impacts of nature-related risks and opportunities on the organization's businesses, strategy and financial planning where such information is material.	Disclose how the organization identifies, assesses and manages nature-related dependencies, impacts, risks and opportunities.	Disclose the metrics and targets used to assess and manage relevant nature-related dependencies, impacts risks and opportunities where such information is material.
Recommended Disclosures	**Recommended Disclosures**	**Recommended Disclosures**	**Recommended Disclosures**
A. Describe the board's oversight of the nature-related dependencies, impacts, risks and opportunties.	A. Describe the nature-related dependencies, impacts, risks and opportunities the organization over the short, medium, and long term.	A. Describe the organisation's processes for identifying and assessing nature-related dependencies, impacts, risks, and opportunities.	A. Disclose the metrics used by the organisation to assess and manage nature-related risks and opportunties in line with its strategy and risk management process.
B. Describe management's role in assessing and managing nature-related dependencies, impacts, risks and opportunties.	B. Describe the impact of nature-related risks and opportunities on the organisation's businesses. strategy, and financial planning.	B. Describe the organization's processes for managing nature-related dependencies, impacts, risks, and opportunities.	B. Disclose the metrics used by the organisation to assess and manage direct, upstream and, if appropriate, downstream dependencies and impacts on nature.
	C. Describe the resilience of the orgnanisation's strategy, talking into consideration different scenarios.	C. Describe how processes for identifying, assessing, and managing nature-related risks are integrated in the organisation's overall risk management.	C. Describe the targets used by the organisation to manage nature-related dependencies, impacts, risks and opportunities and performance against targets.
	D. Describe the organisation's interactions with low integrity ecosystems or areas of water stress.	D. Describe the organisation's approach to locate the sources of inputs used to create value that may generate nature-related dependencies, impacts, risks and opportunities.	D. Describe how targets on nature and climate are aligned and contribute to each other, and any trade-offs.
		E. Describe how stakeholder including rights holder, are engaged by organization in its assessment and response to nature-related dependencies, impacts, risks and opportunities	

Source: TNFD, *The TNFD Draft Disclosure Recommendations*, https://framework.tnfd.global/disclosure-recommendations/ (last visited Dec. 19, 2022).

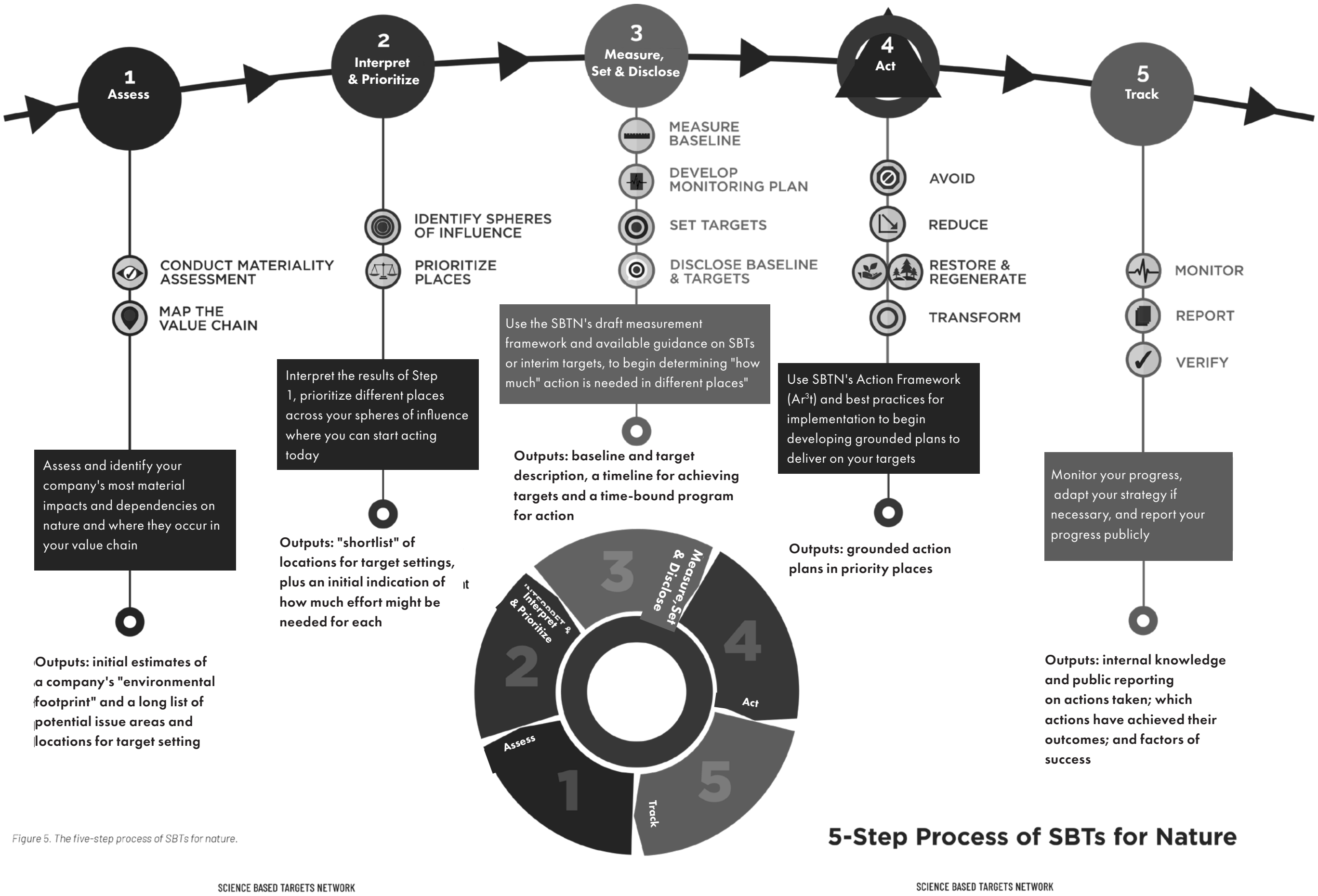
risks are material for disclosure under the TNFD framework? Has the organization identified any nature-related opportunities?

4. **PREPARE** to respond to nature-related risks/opportunities and report: What strategy and resource allocation decisions should be made as a result of the "assess" step? How will targets be defined and progress measured? What will the organization disclose under the TNFD framework? Where and how will such disclosures be made?

The TNFD is also developing specific recommendations for a wide range of sectors, with 24 industries prioritized for the initial development of sector-specific guidance.[26] In

26. These include (1) meat, poultry, and dairy; (2) agricultural products; (3) alcoholic beverages; (4) nonalcoholic beverages; (5) processed foods; (6) forestry management; (7) pulp and paper products; (8) biofuels; (9) engineering and construction services; (10) water utilities and distributors; (11) electric utilities and power generators; (12) construction materials; (13) metals and mining; (14) oil and gas exploration and production; (15) biotechnology and pharmaceuticals; (16) chemicals; (17) apparel, accessories, and footwear; (18) cruise lines; and (19) marine transportation. In addition,

Figure 2. Five-Step Process From the SBTN Initial Guidance for Business



Source: SBTN, Science-Based Targets for Nature: Initial Guidance for Business 14-15 (2020), https://sciencebasedtargetsnetwork.org/wp-content/uploads/2020/11/Science-Based-Targets-for-Nature-Initial-Guidance-for-Business.pdf.

addition to guidance by sector, the TNFD contemplates developing specific guidance for each of the four "realms" of nature under the framework (ocean, freshwater, land, and atmosphere) as well as for various biomes.

2. SBTN

The SBTN is a direct outgrowth of the SBTi, augmenting the latter's sole focus on climate. The SBTN requires participants to examine their nature-related impacts and dependencies across several biophysical systems (e.g., land, freshwater, ocean, climate, and biodiversity). However, unlike with climate, no international rallying cry currently embodies the idea, and no phrase such as "Paris-alignment," "global net zero," or "an average temperature increase," to use as a benchmark for this assessment.

So, the SBTN has based guidance around a goal that several non-state actors have proposed—the concept of a "nature-positive" world. For the SBTN, this requires (1) no global net loss of nature from 2020; (2) a global net-positive state of nature by 2030; and (3) a full recovery of nature by 2050.[27] The Initial Guidance for Business was published in 2020, detailing a five-step process for companies to create nature-related targets in keeping with this "nature-positive" goal (see Figure 2).

Each of these five steps is accompanied by a discussion in the initial guidance for companies considering this process. However, some steps are more developed than others. The main focus is on Step 1 (impact/dependency assessment), Step 3 (baseline measurement and target-setting/disclosure), and Step 4 (action).

For example, the assessment section draws heavily from the Natural Capital Protocol (an analog to the Greenhouse Gas Protocol for climate-related measurements) to establish key concepts and methodological considerations. However, it also breaks the process into three distinct subphases, each providing greater resolution on a company's nature-related impacts/dependencies. The assessment section helpfully identifies tools that companies can use to facilitate these assessments. In contrast, guidance on Step

five financial industries are identified for guidance on how to identify their services' impacts on nature: (20) banks; (21) insurance companies; (22) asset managers; (23) asset owners; and (24) development finance institutions.

27. SBTN, Science-Based Targets for Nature: Initial Guidance for Business 7 (2020), https://sciencebasedtargetsnetwork.org/wp-content/uploads/2020/11/Science-Based-Targets-for-Nature-Initial-Guidance-for-Business.pdf.

Figure 3. AR^{3}T Structure

1. **AVOID**—Prevent new/potential impacts from happening or eliminate such impacts entirely.
2. **REDUCE**—Minimize existing impacts (even if not necessarily eliminating them).
3. **REGENERATE**—Take actions within existing land uses to increase biophysical function and/or ecological productivity (often with a focus on particular contributions to people's quality of life, e.g., food production, carbon sequestration, etc.).
4. **RESTORE**—Initiate or accelerate ecosystem health, integrity, and sustainability, with a focus on permanent changes in state.
5. **TRANSFORM**—Take actions to create system-wide change through technological, economic, institutional, and other factors and changes in underlying values/behaviors.

Source: SBTN, Science-Based Targets for Nature: Initial Guidance for Business 9 (2020), https://sciencebasedtargetsnetwork.org/wp-content/uploads/2020/11/Science-Based-Targets-for-Nature-Initial-Guidance-for-Business.pdf.

2 (interpretation/prioritization) is primarily limited to a list of criteria for companies to consider in establishing their target-setting priorities.

Steps 3 and 4 include detailed information about how to establish and make progress toward targets, respectively. As of the Initial Guidance for Business, only a handful of nature-related issues are sufficiently developed for the SBTN to pilot interim targets. However, the SBTN provides illustrative language and indicators for those topics, as well as the status of other nature-related issue areas.[28] The guidance also introduces an action framework, based upon well-established mitigation/conservation hierarchies, for companies to make progress toward any goals they establish (see Figure 3).

The SBTN is currently working to refine this guidance to allow for formally recognized "science-based targets" for nature, with more detail slated to be published in the near future.[29]

II. How Can Companies Incorporate Natural Capital Into Their ESG Strategies?

The momentum around discussions of natural capital and parallel responses, described above, will likely continue to accelerate. From a regulatory perspective, several jurisdictions continue to publish additional disclosure, labeling, and substantive regulations. Chief among the expected developments are the EU's technical screening criteria for promotion of biodiversity and ecosystem restoration under the Taxonomy Regulation, as well as the reporting standard under the Corporate Sustainability Reporting Directive (CSRD).

The European Commission's expert advisory body on sustainable finance issued recommendations for Taxonomy criteria in March 2022,[30] with official criteria pending from the European Commission. Similarly, the European Financial Reporting Advisory Group has approved draft reporting standards, including a standard on biodiversity and ecosystems, under the CSRD, which are pending adoption by the European Commission.[31] These criteria will inform disclosures by both companies and financial market participants in Europe, which then has knock-on impacts for these entities' operations in other jurisdictions. Internationally, the adoption of the Kunming-Montreal Global Biodiversity Framework at COP15 is likely to help structure countries' (as well as the private sector's) priorities in addressing natural capital concerns.

28. *Id.* at 34, 38-39.
29. *Id.* at 60-61.
30. Platform on Sustainable Finance, PART B—Annex: Technical Screening Criteria (2022), https://commission.europa.eu/system/files/2022-03/220330-sustainable-finance-platform-finance-report-remaining-environmental-objectives-taxonomy-annex_en.pdf.
31. EFRAG Secretariat, ESRS E4 Biodiversity and Ecosystems (Nov. 15, 2022) (draft), https://www.efrag.org/Assets/Download?assetUrl=%2Fsites%2Fwebpublishing%2FMeeting%20Documents%2F2211141505388508%2FDRAFT%20ESRS%20E4%20Biodiversity%20and%20ecosystems%2015.11.2022.pdf.

However, paralleling this, the largest impending developments may well come from the private sector. Many large financial institutions have expressed support for the TNFD or have otherwise incorporated natural capital considerations into their strategies. For example:

- **BNP Paribas**: Published both a road map on incorporating biodiversity into ESG strategy and an initial biodiversity footprint for BNP Paribas' portfolio[32]

- **Citi**: Stated an expectation that the TNFD will ultimately provide "the default corporate reporting framework for nature loss"[33]

- **HSBC**: Launched a "dedicated natural capital asset management company" and identified the TNFD as a key initiative for progressing the assessment and management of exposure to nature-related risks[34]

Corporations across key industry sectors have also expressed support for the TNFD. Currently, a fourth beta version is slated for publication in February 2023, prior to the official launch of the TNFD's final recommendations, currently expected in September 2023.

The SBTN also continues to work on its guidance, with the help of more than 100 participants in its corporate engagement program.[35] The SBTN has announced a goal of finalizing "methodologies and tools for integrated target setting," and "a system for validation of corporate targets, guidance on target wording and claims, and a platform for targets and action plans disclosure," along with related design work, by 2023.[36]

These regimes have already received substantial support. The TNFD, in particular, has been backed by a wide-ranging coalition of financial institutions, companies, and governments. And if the trajectory of the TCFD is any indication, then support for the framework will likely grow exponentially upon finalization.[37]

The TCFD became the preeminent regime for climate-related disclosures in less than five years from the publication of its final recommendations. Since then, the attention on ESG has significantly increased. As such, the TNFD and the broader incorporation of nature-related issues into companies' strategies may have a clearer runway to wide-ranging adoption.

III. How Can Companies Prepare?

If current trends continue, companies may soon face a host of governance, risk management, and disclosure expectations for natural capital, in addition to current ESG expectations. Given the scope of natural capital, fully addressing the topic will present companies a broader, more unwieldy challenge than for climate-related information. But companies can take several steps now, discussed below, to help prepare to address natural capital concerns as they arise, whether from investors, regulators, or other stakeholders.

1. **Assess what data and other resources are already available to draw on.** Many companies already collect metrics that may relate to aspects of natural capital. For example, metrics on freshwater use/consumption and waste generation can speak to aspects of a company's impacts and dependencies on natural capital. Similarly, documentation that may already exist for other purposes, such as environmental management policies or project-related surveys on protected species or habitats may be helpful. While not a complete universe of information, these preexisting documents and metrics can help a company build an important initial picture that will help identify the wider range of information that companies may need to collect in order to develop a robust understanding of their natural capital profile.

   Moreover, companies should draw on lessons learned, and procedures established, for climate-related information. Companies need not reinvent the wheel for natural capital, as some of the most prominent standards garnering the spotlight in this space follow a model similar to their climate-focused counterparts. While natural capital assessments will require additional types of nonfinancial information and analytical tools, the core lessons learned from climate on integrating such information into governance, risk management, and company strategy can generally still apply.

2. **Locate third parties who can help address the full range of interrelated natural capital considerations.** Although many of the structural considerations for natural capital can be adopted from lessons learned in the climate space, natural capital requires the assessment of a wider array of elements that interact in multiple, complex ways. Companies should discuss early with consultants, auditors, and lawyers to understand whether and how those third parties are equipped to help you determine the significance of various nature-related risks. These discussions are particularly important to understand the interactions that may occur. For example, the TNFD's concept of systemic risks expects companies to consider complex scenarios covering multiple risk concepts simultane-

32. BNP Paribas Asset Management, Sustainable by Nature: Our Biodiversity Roadmap (2021), https://docfinder.bnpparibas-am.com/api/files/940B42EF-AFFF-4C89-8C32-D9BFBA72BF24; BNP Paribas Asset Management, Sustainable by Nature Sequel: Our Portfolio Biodiversity Footprint (2022), https://docfinder.bnpparibas-am.com/api/files/60B8656F-6A6F-4A35-9244-A997DCCB59FD.
33. Citi, Biodiversity: The Ecosystem at the Heart of Business 89 (2021), https://ir.citi.com/gps/IfLxkvXYpBe%2BIkzx33IDstLbBb6tXWm3K6VxJuEfb9YC5DQcPgnnXAtB26SMWii%2FnpqxQ4TGOxM%3D.
34. HSBC Holdings PLC, Annual Report and Accounts 2021, at 55 (2022), https://www.hsbc.com/who-we-are/esg-and-responsible-business/esg-reporting-centre?tab=Latest%20reports.
35. SBTN, *What Is the SBTN Corporate Engagement Program?*, https://sciencebasedtargetsnetwork.org/take-action-now/take-action-as-a-company/join-the-sbtn-corporate-engagement-program/ (last visited Dec. 8, 2022).
36. SBTN, *supra* note 27, at 60-61. *See also* SBTN, *supra* note 35.
37. TCFD, 2021 Status Report 14 fig.A2 (2021), https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Status_Report.pdf.

ously, as well as how failure to sufficiently manage one form of risk may cascade into failures in other areas.

Moreover, stakeholder groups are increasingly aware of the interconnection between various ESG concepts, often explicitly mentioning these interconnections when discussing natural capital, particularly with the connection to climate. As such, companies should ensure that advisors are sufficiently experienced and sophisticated to advise on multiple aspects of ESG, and how they intersect.

3. **Outline a natural capital strategy.** As with climate, stakeholders do not simply want to know a company's current position vis-à-vis natural capital, but also the company's direction of travel. These expectations need to be met in a consistent and well-communicated manner. A coherent businesswide strategy can help in achieving this. While every company needs to consider the specifics of its own situation, common elements would generally include:

    a. Enhanced oversight of nature-related matters in the company's governance procedures, including board and executive levels;

    b. Identification and assessment of the company's primary nature-related risks and impacts;

    c. Evaluation of multiple realistic, but stringent, scenarios related to the company's primary nature-related risks/impacts;

    d. Integration of natural capital considerations into the company's overall business strategy and, if applicable, existing ESG strategy;

    e. Adoption of policies, targets, and/or other measures to guide the company's progress on natural capital; and

    f. Use of reputable tools and frameworks to measure and disclose ongoing progress.

4. **Capitalize on emerging opportunities and intersections with existing initiatives.** Incorporating natural capital into a company's strategy is not solely about risk management. Companies should also consider the role of nature-related opportunities. For example, as natural capital gains attention at leading global financial institutions, forward-looking companies have incorporated nature-related indicators into frameworks for green or sustainability-linked bonds as a way of accessing more, or cheaper, sources of capital.[38] Companies have also responded to stakeholders' increasing interest in nature-based solutions, the incorporation of natural features or processes to address various societal challenges, and further integration of nature into product design considerations.[39]

    Companies should also take the time to evaluate how their efforts across ESG topics interrelate. In particular, the identified intersection of climate and nature can help companies to progress on targets in both areas simultaneously. Globally, the World Business Council for Sustainable Development (WBCSD) has noted that nature-based solutions could deliver more than one-third of the emissions reductions needed to limit global warming to 2º.[40] But other topics within the ambit of ESG can intersect with natural capital as well. As such, a holistic approach to ESG initiatives may allow companies to better identify, capture, and articulate any co-benefits of their endeavors and thus pursue their ESG strategies more efficiently.

Appendix A. Major Natural Capital Regimes

Multiple prominent natural capital-related regimes, listed in alphabetical order, are summarized below. This is not an exhaustive list and, as with climate, additional frameworks and initiatives are likely to develop as more, and better, data allow stakeholders to identify particular action areas.

1. **Biological Diversity Protocol (BD Protocol).** The BD Protocol is an accounting framework for recording net biodiversity impact data in a systematic manner, over time, and at the company level. Fashioned after the Greenhouse Gas Protocol for climate-related accounting, the BD Protocol is designed to be program/use-agnostic; however, it does not cover accounting for the genetic, businesses dependency, or ecosystem services aspects of biodiversity. Additionally, unlike much climate accounting—which generally treats greenhouse gas emissions as fungible—the BD Protocol incorporates an "equity" component in accounting for types of biodiversity, meaning that losses/gains can only be aggregated for ecologically equivalent biodiversity components.
2. **Business for Nature Coalition (BfN). BfN** is a group of business and conservation organizations working together to promote "a nature-positive,

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38. *See*, *e.g.*, Press Release, Bunge, Bunge Refinances Its $1.75 Billion Revolving Credit Facility Tied to Enhanced Sustainability Linked Targets (Dec. 16, 2021), https://investors.bunge.com/investors/news-and-events/press-releases/year/2021/12-16-2021 (noting the "interest rate under this facility is linked to [among other things] five core sustainability targets," including with regards to preventing deforestation); Klabin, Sustainability-Linked Bond Framework (2020), https://api.mziq.com/mzfilemanager/v2/d/1c41fa99-efe7-4e72-81dd-5b571f5aa376/5d1eadca-d195-bac3-8dfe-6d6a0a1344ad?origin=2 (including a specific key performance indicator on ecosystem rewilding). *See also* Press Release, BBVA, BBVA Creates the "Water Footprint" Loan and Launches It Worldwide Together With Iberdrola (July 14, 2022), https://www.bbva.com/en/sustainability/bbva-creates-the-water-footprint-loan-and-launches-it-worldwide-together-with-iberdrola/.
39. *See*, *e.g.*, *Designing New Nature-Based Solutions for Better Oil Palm Farming*, Ferrero (May 2, 2022), https://www.ferrero.com/fc-4073?newsRVP=2221; Press Release, Holcim, Holcim Launches Nature-Positive Strategy With Measurable 2030 Biodiversity and Water Targets (Sept. 3, 2021), https://www.holcim.com/media/media-releases/holcim-launches-nature-positive-strategy (discussing strategies to incorporate nature into the built environment).
40. WBCSD, Accelerating Business Solutions for Climate and Nature 17 (2020), https://www.wbcsd.org/contentwbc/download/10892/160980/1.

net-zero-emissions and equitable world." This consists of advocacy work at the international, national, and company levels. BfN works alongside, and has indicated support for, both the TNFD and SBTN as part of BfN's call to action for businesses to assess, commit to targets, transform, and disclose their impacts, and dependencies, on nature.

3. **EU Business@Biodiversity (B@B**). B@B was established by the European Commission as an EU-level platform to promote the integration of biodiversity and related natural capital considerations into business practices. B@B works with EU companies to develop guidance and tools to support such integration, in addition to advocating for the mainstreaming of natural capital considerations in business.
4. **Finance for Biodiversity Pledge (FBP)**. The FBP is a private-sector outgrowth of B@B for financial institutions. FBP signatory institutions commit to pursuing five overarching actions by 2024, including target-setting and annual disclosure, regarding biodiversity. The FBP Foundation has published general guidance on implementing the pledge. As of the publication of this guidance, nearly 100 financial institutions—representing more than €14 trillion in assets—had joined the pledge.
5. **Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)**. Unlike the above regimes, the IPBES is an intergovernmental organization intended to improve the interface between science and policy on biodiversity and ecosystem services. Effectively the natural capital analog to the Intergovernmental Panel on Climate Change, the IPBES publishes reports on the status of, and trends regarding, biodiversity and ecosystem services at the global level, as well as how those trends interface with human well-being.
6. **Natural Capital Finance Alliance (NCFA)**. The NCFA was originally formed to support signatories of the Natural Capital Declaration, a 2012 project by the U.N. Environment Programme Finance Initiative (UNEP FI) to promote the incorporation of natural capital criteria into financial institutions' product offerings and accounting/disclosure frameworks. The NCFA continues to promote best practices for natural capital integration in the financial sector, partnering with UNEP FI in developing the Exploring Natural Capital Opportunities, Risks, and Exposure (ENCORE) tool for assessing natural capital risks.
7. **Natural Capital Protocol (NatCap Protocol).** Developed by the Capitals Coalition, the NatCap Protocol is a framework for identifying, measuring, and valuing organizations' impacts and dependencies on natural capital. Broader than the BD Protocol, the NatCap Protocol looks to other forms of natural capital than biodiversity; however, it can be paired with the BD Protocol, using the BD Protocol's inputs for the biodiversity portions of a broader natural capital accounting.
8. **Partnership for Biodiversity Accounting Financials (PBAF).** An initiative to develop a harmonized biodiversity accounting framework for the financial sector, PBAF is an analog to the Partnership for Carbon Accounting Financials, an initiative that provides guidance for financial institutions' climate accounting.
9. **SBTN**. As discussed in more detail above, the SBTN is an outgrowth of the SBTi to produce a framework for corporate target-setting on natural capital impacts beyond climate. While criteria are still under development, the SBTN's goal is to promote targets that are in alignment with a global net-positive state for nature by 2030 and a full recovery of nature by 2050.
10. **TNFD**. As featured above, the TNFD is a natural capital analog to the TCFD. The TNFD promotes assessment and disclosure of companies' nature-related impacts and dependencies, as well as companies' governance, strategy, and risk management approaches to same. Because of the larger remit, the TNFD anticipates developing sector-specific guidance for more industries, as well as guidance specific to different aspects of nature (e.g., ocean, freshwater, land, and atmosphere).
11. **U.N. Principles for Responsible Banking (UN PRB) and U.N. Principles for Responsible Investment (UN PRI).** The U.N. supports these two different initiatives for financial institutions to align their activities with pertinent ESG considerations. Each initiative consists of six overarching principles, including a reporting commitment, while allowing signatories to identify the most meaningful ways for each financial institution to achieve shared societal goals, which can include efforts on preserving and regenerating natural capital.