

Trends and Opportunities in Nature Disclosures and Markets

SCHROETER
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Josef Schroeter & Ben Gager, 2023

“Investing in solutions to biodiversity loss will be a “megatrend” ...” Largest investment trend in our lifetime.”

-Thomas Cox, Fidelity, 2023

“The world is facing large-scale ecological breakdown and biodiversity loss. Biodiversity credits – or biocredits – are a new market innovation that would work similarly to carbon credits, as a measurable and traceable unit of biodiversity that can be traded and sold for investment in biodiversity conservation and poverty reduction.”

-International Institute for Environment and Development, 2022

“Terrasos sold all 600 biodiversity credits from the Meta habitat bank in Colombia and seeks to expand further to reach 7,000 ha for its eight habitat banks.”

-Irina Likhachova, Biodiversity Finance, 2023

“This global consistency is different in the nature-related sphere. As the TNFD has rightly acknowledged, biomes and ecosystems – and impacts upon them – are inherently local, and considerations pertaining to the transition from nature-negative to nature-positive economic activities are highly geographically granular.”

-Institute of International Finance, 2023

Overview

Developing a partnership-based market for biodiversity credits within the Taskforce on Nature-Related Financial Disclosures (TNFD) framework can enable individuals and industries to support biodiversity directly and effectively within their region. Developing a market for biodiversity credits, one that does not enable further biodiversity harm, but rather supports biodiversity efforts in regions based on specific impacts will mitigate the potential for bad actors and greenwashing within the system. The TNFD provides the framework in which to evaluate impact, and the market can provide the system to financially support biodiversity protection and development.

Taskforce on Nature-Related Financial Disclosures Reporting Basics

The TNFD framework expands on current global standards, building off the Taskforce on Climate-Related Financial Disclosures (TCFD) model encompassing the four pillars of governance, strategy, risk and impact management, and metrics and targets.

Governance	Strategy	Risk & Impact Management	Metrics & Targets
Disclose the organisation's governance around nature-related dependencies, impacts, risks and opportunities.	Disclose the actual and potential impacts of nature-related dependencies, impacts, risks and opportunities on the organisation's businesses, strategy and financial planning where such information is material.	Disclose how the organisation 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.
<p>Recommended Disclosures</p> <p>A. Describe the board's oversight of nature-related dependencies, impacts, risks and opportunities.</p> <p>B. Describe management's role in assessing and managing nature-related dependencies, impacts, risks and opportunities.</p>	<p>Recommended Disclosures</p> <p>A. Describe the nature-related dependencies, impacts, risks and opportunities the organisation has identified over the short, medium, and long term.</p> <p>B. Describe the effect nature-related risks and opportunities have had and may have on the organisation's businesses, strategy, and financial planning.</p> <p>C. Describe the resilience of the organisation's strategy to nature-related risks and opportunities, taking into consideration different scenarios.</p> <p>D. Disclose the locations where there are assets and/or activities in the organisation's direct operations, and upstream and/or downstream and/or financed, where relevant, that are in: high integrity ecosystems; and/or areas of rapid decline in ecosystem integrity; and/or areas of high biodiversity importance; and/or areas of water stress; and/or areas where the organisation is likely to have significant potential dependencies and/or impacts.</p>	<p>Recommended Disclosures</p> <p>A. (i) Describe the organisation's processes for identifying and assessing nature-related dependencies, impacts, risks and opportunities in its direct operations.</p> <p>A. (ii) Describe the organisation's approach to identifying nature-related dependencies, impacts, risks and opportunities in its upstream and downstream value chain(s) and financed activities and assets for assessment.</p> <p>B. Describe the organisation's processes for managing nature-related dependencies, impacts, risks and opportunities and actions taken in light of these processes.</p> <p>C. Describe how processes for identifying, assessing and managing nature-related risks are integrated into the organisation's overall risk management.</p> <p>D. Describe how affected stakeholders are engaged by the organisation in its assessment of, and response to, nature-related dependencies, impacts, risks and opportunities.</p>	<p>Recommended Disclosures</p> <p>A. Disclose the metrics used by the organisation to assess and manage material nature-related risks and opportunities in line with its strategy and risk management process.</p> <p>B. Disclose the metrics used by the organisation to assess and manage dependencies and impacts on nature.</p> <p>C. Describe the targets and goals used by the organisation to manage nature-related dependencies, impacts, risks and opportunities and its performance against these.</p>

From: <https://framework.tnfd.global/draft-recommended-disclosures/>

The reporting listed within the TNFD will help to directly identify business impacts, policies, and risks as they relate to biodiversity. The data collected can be used to define material areas for individual businesses and industry reporting.

The final framework for TNFD was released in September 2023 and already companies and investors are beginning to take nature disclosures into account. This white paper explores some of the themes we see emerging in the first phase of engagement with the TNFD.

Overarching Themes:

- Companies are showing early acceptance and engagement with TNFD voluntary disclosures and a willingness to report on and integrate nature and biodiversity into strategy planning.
- Nature and biodiversity data currently exist and developing standards for voluntary reporting and through pragmatic regulation will improve data integrity locally and globally.
- Eventual Global Standards AND Local Regulation and Markets.
- Biodiverse rich countries and states will be early movers in both regulation and market development.

Data

Existing Data

Significant data collection exists in relation to environmental impacts for various industries. Data can be aggregated from existing sources and augmented as necessary. Utilizing existing data sources and collection can help to minimize additional reporting requirements, reducing cost and time expenditures for market users.

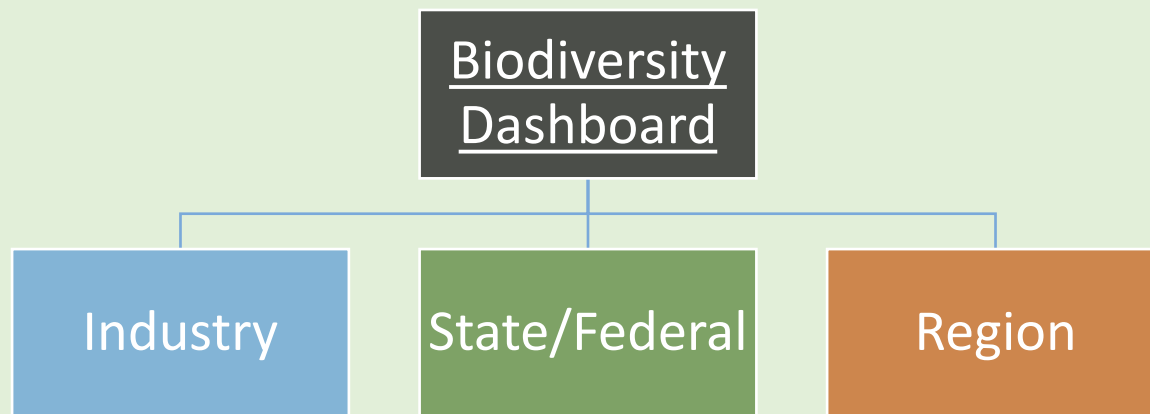
Current Data Collection by Individual Organizations	Government Collected Data	Additional Required Data
<ul style="list-style-type: none">• Collected by individual market participants already• Examples include:<ul style="list-style-type: none">• Carbon• Wastewater• Energy Use• Material Consumption	<ul style="list-style-type: none">• Data currently being collected by state and local governments• Used for grants, agricultural management, and other monitored activities• Bio-diversity in region• Pollution	<ul style="list-style-type: none">• Industry and/or individual specific biodiversity impacts• Desired measurements for specific market users

Emerging Data

As the market grows beyond early users, specific data based on individual market users' needs will likely be required to provide strong feedback for market options and effective biodiversity funding. Addressing desired measurements for specific market users will improve data selection and availability, generating stronger participation. Maintaining flexibility to align market options with business needs based on emerging data will be critical for market success. Notably the TNFD recently published its results from its scoping study exploring the case for a global nature related data facility where they indicated, *"We believe there is a case for some form of global nature-related public data facility."* We believe that a global data facility can supply reporting standards and that local data facilities will become more consistent in the format and method of collecting data. This will allow local data collection to have overlap and comparability globally that will assist investors, governments, and companies in benchmarking and auditing.

Dashboard

Developing a biodiversity dashboard to guide understanding of impacts, market needs and cutoffs, and regional actions accessible by all market users will generate the connections between existing measures, the TNFD framework, and the emerging biodiversity financial market. Continued pressure to address biodiversity will create larger demand for market options. Reporting particularly tailored to specific impacts such as species, watersheds, forests, soils, and more can provide market opportunities for both local and global businesses to address specific biodiversity relationships.



Industry:

- Voluntary access and participation.
- Understand impact of and on biodiversity.
- Understand materiality.

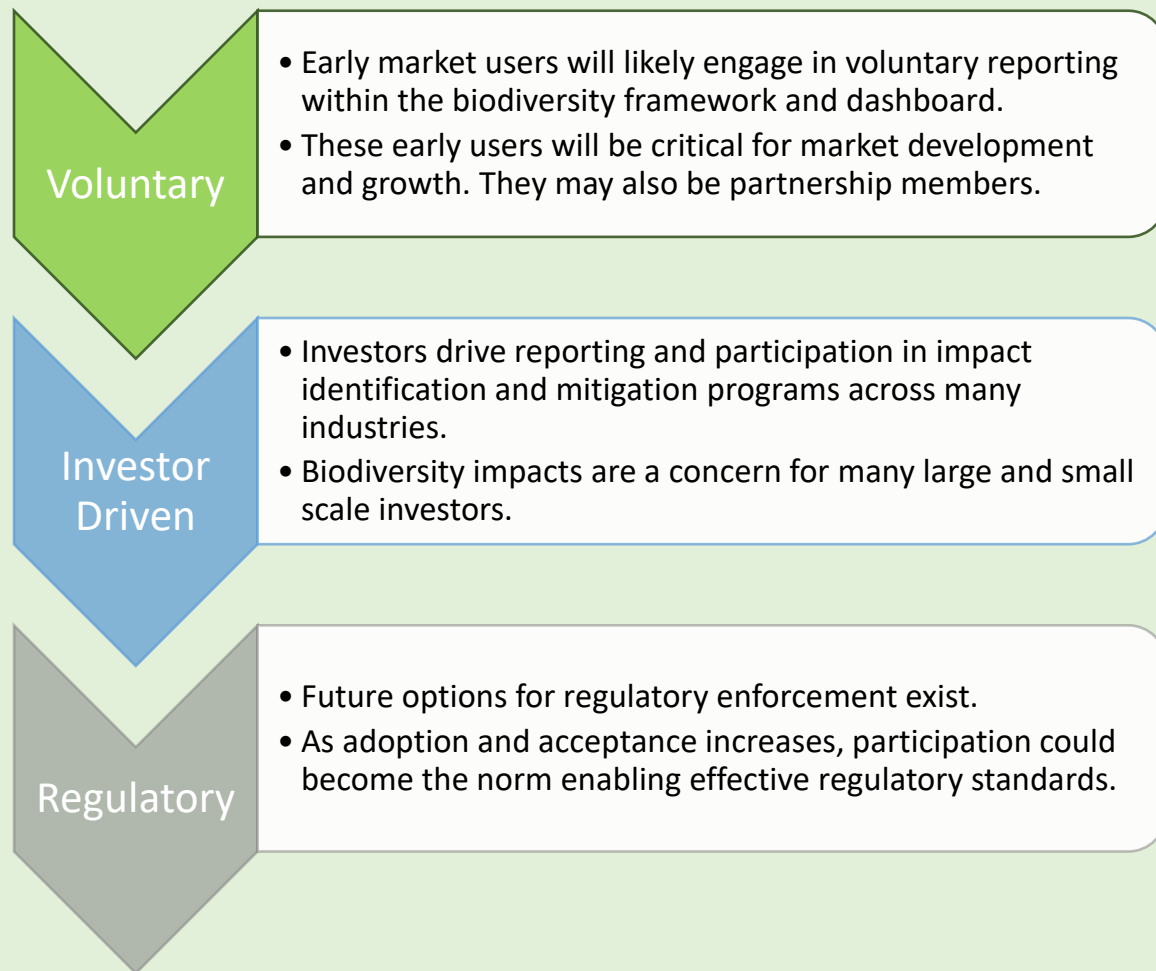
State/Federal:

- State and federal agencies and boards are already involved in related impacts and metrics.
- Management of land, biodiversity, species, outdoor recreation and more.

Region:

- Defining and understanding regional boundaries for related biodiversity impacts.
- Define market reach for varied biodiversity financial instruments.

Reporting



Early reporting will rely on existing data provided by voluntary market participants. This early participation will be critical for developing the potential investment markets, and standards. With increasing use and pressure for recognition of biodiversity from external investors, additional market participants will emerge resulting in stronger reporting practices within the framework provided by the TNFD.

In the near term, we believe that biodiverse rich states and countries will lead the way. In the U.S. biodiversity and water rich states like Colorado and Nebraska will provide early regulation in that they stand to gain and lose much if they wait for federal action that will not necessarily be in state interests.

Nature Market Development

“Nature’s destruction presents profound risks to human societies and as with any serious risk we face, the rational response is to hedge - in the case of biodiversity loss this means a comprehensive, worldwide effort to appropriately value, protect, and restore nature.” Hank Paulson- Chair of the Paulson Institute and Past CEO of Goldman Sachs and Past U.S. Secretary of Treasury

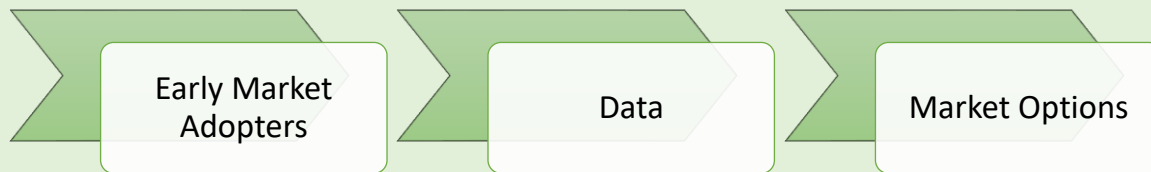
Nature markets have the opportunity to gain experience from the controversy that has plagued carbon markets. In addition, nature markets have their own fungibility problem in that finding a standard value for biodiversity is likely not possible. In other words, a ton of carbon is a ton of carbon but a sandhill crane’s value compared to a wolf or a tree in NYC compared to a tree in a cloud forest are nonsensical efforts. That said, while a global or general value may be some distance off, local, and regional markets in nature rich regions can be the early markets for such instruments as biodiversity credits and bonds.

Roughly 600-800 billion dollars more per year is needed in investment to stop and repair the damage done by such sectors as oil and gas, tourism, agriculture, industry, and tech according to the Paulson Institute. We mention tech in that it continues to get a free pass amongst ESG index funds while having an oversized direct and indirect negative impact on biodiversity.

“Biodiversity credits, similar in theory to carbon credits but with far larger scope for impact, put a monetary value on specific ecosystem services, including carbon sequestration, of the world’s flora and fauna, and do so in ways that are representative of unique local geographies and contexts.”-The Economist, March 1 2023

Our view is that the early winners and pioneers of biodiversity credit markets that have integrity will be states and countries that can develop healthy collaboration with their commercial partners, indigenous protectors of the environment and the community at large that will result in local improvements that can be independently verified.

Key Points for Success



Early Market Adopters:

- Initial adopters will be key in defining and forming the partnerships required to enable the market to operate effectively.
- Key partners will define initial market offerings.

Data:

- Leveraging existing data will limit the complexity, cost, and time for market members.
- Data points related to biodiversity impacts will continue to shape future market offerings.

Market Options:

- Flexibility and availability of varied biodiversity and other nature related bonds and credits within the market is key to enabling effective participation.
- Data driven offerings need to align with the desires of market participants.

Colorado, U.S.A. a potential early market and adopter of TNFD

Why Colorado, why local?

Colorado contains six major ecoregions: The Wyoming Basin, Colorado Plateaus, Southern Rockies, Arizona/New Mexico Plateau, High Plains, and the Southwestern Tablelands and each is subdivided further into unique and distinct ecological areas (USGS, ND). Those ecoregions fall into four major watersheds: The Platte, Colorado, Arkansas, and Rio Grande (Colorado State Forest Service, 2023). These ecoregions and watersheds house nearly 1000 wildlife species, giving Colorado one of the most diverse wildlife populations in North America (Colorado Wildlife Council, 2020). The impacts of business in Colorado are directly linked to these ecoregions and species, contained within the geographical region in which Colorado businesses operate. Whether direct impacts stem from land management or alteration, waterway use or contamination, or other various relationships the implications for biodiversity impacts are inherently local. The locality of biodiversity impacts makes local management and measurement an effective and meaningful solution, one that could provide the state of Colorado with meaningful funding for the measurable protection of the biodiversity that defines us.

This effort would match well given the two largest industries by revenue in Colorado are Oil and Gas Extraction at number one, followed by Tourism according to 2022 numbers from Ibis World.

(<https://www.ibisworld.com>)

Conclusion

The development of a public, private partnership for a geographically defined biodiversity futures market in Colorado, modeled within the TNFD framework, could link businesses, land managers, state offices, and communities. This market could provide effective, meaningful, and measurable biodiversity protections within the state, ensuring long term funding for biodiversity protection and management.

Resources

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Authors

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