## WATER & ECOLOGY SUSTAINABILITY REPORT

# Building The Business Case For Nature Positivity





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# OBJECTIVE

In response to a greater focus on nature-positive investment in North America, Trinity Consultants (Trinity) is meeting this market demand with a comprehensive study on the topic. Aiming to understand the motivations of service buyers, gain insights into specific areas of interest, and establish how these priorities will develop over the foreseeable future, Trinity consolidated its insights to allow businesses to benchmark their nature-led investment activity against their peers, as well as to study the wider trends within the community.



# RESEARCH METHODOLOGY

To gain insights into how organizations are addressing nature-related challenges within their operations, Trinity Consultants commissioned independent research firm Verdantix to conduct a comprehensive study. Verdantix undertook anonymized interviews with 100 executives from the Real Estate, Infrastructure, Mining, Renewables, Utilities, and Liquid Natural Gas (LNG) sectors, headquartered in the United States and Canada. The respondents, who held roles across sustainability, legal, risk, and finance functions, all had influence over naturerelated projects and investments. For the purposes of the study, nature positivity was defined as initiatives and programs aimed at conserving, restoring, or enhancing natural ecosystems as part of a company's sustainability and environmental strategies. These projects typically focus on achieving positive outcomes for nature and biodiversity, as well as topics contained under this umbrella: climate regulation, water stewardship (including quality, quantity, and habitats), local communities, and other ecosystem services. The survey gained insights into the maturity of nature-related strategies, and current and future investment priorities, as well as the challenges faced by organizations.

# Growing awareness of the importance of nature and biodiversity

In 2020, the World Economic Forum (WEF) estimated that \$44 trillion in economic value generation was at risk through nature-related business dependencies. Organizations that operate in nature-resourcedependent industries and rely on raw materials and ecosystem services will be directly impacted by nature and biodiversity decline (Table 1) and are coming under increased scrutiny, owing to the impact of their operations on biodiversity. It is worth noting that nature and biodiversity strategies are often considered to be a sub-set of ESG and sustainability strategies; however, as evidenced by the survey, a wide proportion of firms do not automatically consider nature and biodiversity in their initial ESG and sustainability strategies. Those firms that do approach nature and biodiversity strategically are often more mature in their sustainability journeys or have significant business dependencies with regard to the natural world. Against this backdrop, business leaders increasingly recognize that nature and biodiversity must be factored into business planning and strategies, to mitigate nature risks, and that biodiversity impacts must be developed. The survey results reveal that:

#### TABLE 1: Definition of nature and biodiversity

Term	Definition for the purposes of this report		
Nature	The natural world, with an emphasis on the diversity of living organisms (including people) and their interactions with each other and their environment.		
Biodiversity	The variability among living organisms from all sources, including, inter alia, terrestrial, marine and other aquatic ecosystems, and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.		



# North American regulatory and policy developments drive nature and biodiversity strategies

Organizations operating in the North American market are governed by both federal and state-level (US) or provincial-level (Canada) environmental legislation aimed at protecting public and environmental health. The survey found that such regulatory and policy developments are the most significant driver influencing commitment to nature and biodiversity (in this instance, data collection, reporting and compliance, such as for land remediation) for 52 of organizations, and very significant for an additional 31% of businesses (see Figure 1). The Canadian market is more likely to be driven by the regulatory landscape, with 62% of respondents selecting it as the most significant driver. These regulations cover a wide range of environmental issues; for example, the Canadian Environmental Protection Act (CEPA), initially enacted in 1999, is undergoing updates such as amendment S-5 to introduce more stringent management of chemicals and toxic substances. Taking it a step further, Canada is also in the process of introducing bill C-59, aimed at eliminating greenwashing claims, and has seen a strong response within the oil and gas industry, especially among oil-sandrelated firms. In the US, the Clean Water Act and Clean Air Act require organizations to comply with water and air quality standards and to implement pollution control technologies to minimize harmful emissions (see Figure 2).

### FIGURE 1: Drivers of nature and biodiversity strategies

Question: How significant are the following drivers in influencing your firm's commitment to nature and biodiversity?



## FIGURE 2: Table of key regulatory drivers of nature and biodiversity strategies

Regulation	Jurisdiction	Description
Canadian Environmental Protection Act (CEPA)	Canada	Legislation that aims to prevent pollution and protect the environment and human health by regulating toxic substances, air and water quality, and hazardous waste management. It provides the framework for assessing and managing chemical substances and promoting sustainable development through environmental stewardship.
Clean Water Act	US	Federal law aimed at regulating the discharge of pollutants into the waters of the United States and setting water quality standards to ensure the protection and restoration of the nation's water bodies. It empowers the Environmental Protection Agency (EPA) to implement pollution control programs and enforce regulations to maintain and improve water quality.
Clean Air Act	US	Federal law designed to control air pollution and protect air quality by setting emission standards for harmful pollutants from industries, vehicles, and other sources. It authorizes the Environmental Protection Agency (EPA) to establish and enforce regulations to reduce air pollution and safeguard public health and the environment.
National Environmental Policy Act (NEPA)	US	US law that requires federal agencies to assess the environmental impacts of their proposed actions before making decisions. It mandates the preparation of detailed statements known as Environmental Impact Statements (EISs) for major projects, promoting informed decision-making and public participation in environmental protection.
Endangered Species Act	US	US law aimed at protecting and recovering endangered species and the ecosystems on which they depend. It provides for the conservation of endangered and threatened species through measures such as habitat protection, species recovery plans, and prohibitions on harm to and trade of listed species.
Magnuson- Stevens Fisheries Act	US	US law that governs marine fisheries management in federal waters, aiming to prevent overfishing, rebuild overfished stocks, and ensure sustainable fisheries. It establishes regional fishery management councils that develop and implement management plans based on scientific data to conserve fishery resources.
Corporate Sustainability Reporting Directive (CSRD)	EU	EU regulation that enhances and standardizes sustainability reporting requirements for companies. ESRS E4 details specific reporting requirements pertaining to biodiversity and ecosystems and requires organizations to publicly disclose a transition plan to ensure their business model is compatible, to achieve three targets: no net biodiversity loss by 2030; net gain from biodiversity by 2030; and full biodiversity recovery by 2050.

# Nature and biodiversity strategies are less mature than ESG and sustainability strategies

Effective risk management requires organizations to address nature and biodiversity as intrinsic factors integrated into broader sustainability and climate strategies. However, the survey revealed a significant maturity gap between sustainability strategies and nature and biodiversity strategies. Seventy-two per cent of the 100 organizations surveyed reported having a comprehensive ESG and sustainability strategy that aligned with their business strategy, whereas only 23% had a comparable strategy for nature and biodiversity (see Figures 3 and 4). The survey found that the maturity of ESG and sustainability strategies, as well as nature and biodiversity strategies, increases with the size of the organization.

#### FIGURE 3 & 4: Maturity of nature and biodiversity compared with ESG and sustainability strategies



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## Organizations place a high priority on understanding the impacts of extreme weather events on operations

Feedback loops between climate change and biodiversity loss are deeply interconnected. Biodiverse ecosystems provide critical ecosystem services, such as soil stabilization and carbon sequestration, with forests acting as carbon sinks by absorbing CO2 from the atmosphere. At the same time, climate change alters temperatures and weather patterns, disrupting natural habitats and the life cycles of flora and fauna – potentially leading to species distribution into non-native habitats, population decline and even extinctions. The world witnessed a year of record-setting extreme weather in 2023, leading to flooding, wildfires and other damages. The survey found that 80% of organizations are committing high or medium investments to understand the impacts of extreme weather events on their operations (see Figure 5). Likely investment projects are those involving terrestrial impact modelling (for example, relating to wildfires, hurricanes, and typhoons); sea-level analysis; and flood mitigation processes. The Utilities sector demonstrated the largest appetite to understand the impacts of extreme weather events on infrastructure assets, with these having the potential to strain existing transmission and capacity due to high demand or natural events.

#### FIGURE 5: Current investment in nature and biodiversity initiatives

#### Question: Does your organization invest in the following nature and biodiversity sub-categories?



# Investments in water stewardship and biodiversity conservation are high on the corporate agenda

Organizations are increasingly investing in water stewardship and biodiversity conservation as part of their efforts to contribute towards nature-positive outcomes. The Mining Association of Canada introduced the Water Stewardship Protocol, which sets standards for sustainable water management, encouraging miners to consider the broader watershed in their planning and operations. The focus is on minimizing water use, improving water recycling, and enhancing water quality management to support both the environment and local communities. Furthermore, the International Council on Mining and Metals (ICMM) is committing its members to take action to achieve nature-positive outcomes that promote health, diversity, and the resilience of species, ecosystems, and natural processes. Meanwhile, in the US, firms are proactively partnering with local authorities to create water conservation programs - witness, for example, the Arizona System Conservation Fund aiming to stabilize water levels in the Colorado River.

Organizations in the Utilities sector are also undertaking biodiversity programs to manage vegetation in transmission corridors, while hydroelectric power generators are supporting projects aimed at conserving and enhancing fish and wildlife populations affected by hydroelectric developments. Firms are focusing on these specific goals for a number of reasons, primarily relating to internal sustainability goals, stakeholder expectations, long-term risk management, and economic incentives. While water-related goals have not achieved compensation package status, their criticality to operations and public expectations are elevating them to board-room-level discussions. Deeper partnerships and scrutiny with public institutions are driving firms to be more conscious of how they use and dispose of water and wastewater.



# Nature and biodiversity strategies will continue to evolve in line with stakeholder and regulatory expectations

Our study – and further research – indicate that firms cannot afford to stand still when it comes to their nature and biodiversity strategies. Understanding nature-related impacts and risks should be an integral part of the broader enterprise risk management (ERM) framework, with regular review and updates. Figure 6 demonstrates that a significant number of organizations are either maintaining or modestly increasing their investment across several key nature-related areas over the next three years. As environmental challenges evolve, continuous improvement and adaptation in nature and biodiversity strategies will be crucial for organizational resilience and success.

#### FIGURE 6: Future investment in nature and biodiversity initiatives

Question: How do you foresee investment in the following themes evolving over the next 3 years?



# Seventy per cent of organizations have established an internal nature and biodiversity target

The survey further revealed that 68% of large organizations with over \$1bn in annual revenues have set internal targets for nature and biodiversity. Despite this, and notwithstanding the fact that 36% of these targets are aligned to nature-based targets from the Science-Based Targets Network (SBTN), only 8% of all firms have shared these targets externally (see Figure 7). Publicly announcing targets creates accountability - yet without credible strategies and plans to meet them, such disclosures risk being perceived as greenwashing. Many organizations may refrain from publicizing their targets if their strategies are still under development or lack scientific rigor, in an attempt to protect their brand reputation. This discrepancy further underscores the fact that biodiversity and nature strategies often lag in maturity compared with broader sustainability initiatives.

### FIGURE 7: Corporate nature and biodiversity targets

Question: Has your organization established any targets relating to nature and biodiversity?





## Lack of industry standards and internal expertise obstruct firms' efforts to implement nature and biodiversity strategies

When asked about the top challenges they face regarding their nature and biodiversity strategies, 52% of organizations identified a lack of industry standards and guidelines as the primary obstacle (see Figure 8). This issue is even more pronounced in specific sectors, with 67% of respondents in the Mining sector and 75% in Renewables highlighting it as their top challenge. Unlike climate-related disclosures, which benefit from standardized and globally recognized metrics, there is currently no uniform set of indicators to measure biodiversity impact. Consequently, different organizations may use different methodologies, leading to incomparable and often unreliable data. Owing to the complexity and breadth of biodiversity issues, a lack of internal knowledge and expertise was noted as a significant barrier by 52% of organizations. This issue is particularly significant for medium-sized organizations, with revenues between \$500 million and \$1 billion, where 80% reported it as a top challenge.

### FIGURE 8: Challenges faced by organizations

Question: What challenges does your firm face in implementing its nature and biodiversity strategy?



# Organizations strategically leverage third-party expertise to plug internal knowledge gaps

Nature and biodiversity-related processes and activities often sit outside the core competencies of organizations operating in the Mining, Utilities, Renewables, LNG and Real Estate sectors. Figure 8 demonstrates that a lack of internal knowledge regarding nature and biodiversity issues is one of the biggest challenges organizations face. As a result, businesses strategically leverage third-party consulting services to conduct projects requiring specialized nature and biodiversity expertise. Specifically, 51% of organizations use external providers for all environmental impact assessment projects and a further 31% use services for most projects of this nature (see Figure 9). In the Mining sector, 69% of organizations use third-party services for all or most compliance and permitting projects. These projects demand a thorough understanding of key regulatory frameworks and laws, along with comprehensive environmental impact assessments, effective local community engagement, and support for the process of obtaining operational permits.

#### FIGURE 9: Use of third-party consulting services

Question: To what extent do you use third-party consulting services to support the following?



# Social license to operate drives mining organizations' nature-positive thinking

Mining operations are often located in ecologically sensitive areas and can have adverse impacts on both aquatic and terrestrial habitats. Operating licenses and permits, as well as social licenses to operate, require miners to navigate environmental assessment processes, which are contingent on high-quality environmental monitoring and remediation plans. In Canada, an estimated 80% of mining activities occur in boreal forest regions, necessitating careful management to protect these sensitive ecosystems. Some mining companies are undertaking extensive reforestation projects, involving planting native tree species, restoring disturbed land, and enhancing habitat connectivity for wildlife. Water management strategies involve minimizing the impacts of tailings dams on water quality by undertaking continuous quality monitoring, and restoring riparian and aquatic habitats to support biodiversity and ecosystem health.



# Emerging disclosure requirements add to the reporting burden of statelevel and national regulations

Organizations in the United States and Canada face an increasingly complex regulatory landscape of state and national regulations, with different jurisdictions having different goals and objectives. The Canadian Environmental Protection Act (CEPA), the National Environmental Policy Act (NEPA), Alberta's Environmental Protection and Enhancement Act, the Endangered Species Act (ESA), and the Federal Land Policy and Management Act (FLPMA) all emerged throughout the survey as key regulations shaping biodiversity and nature strategies. These regulations mandate comprehensive environmental protection measures, such as pollution control, habitat conservation, and sustainable resource management. For example, the ESA requires the protection of habitats critical to the survival of endangered species, while the FLPMA governs the use of federal lands to ensure environmental protection and sustainable use. Additionally, organizations are under pressure to report in line with non-regulated international disclosure frameworks such as the CDP, the Global Reporting Initiative's (GRI) Biodiversity standard, and the Taskforce on Nature-related Financial Disclosures (TNFD), which finalized its recommendations in March 2023.



## Firms should anticipate more stringent data quality requirements for reporting, alongside methodological transparency

Currently, around 40% of the organizations interviewed do not make nature and biodiversity disclosures. Among those that do, only 8% believe their nature and biodiversity disclosures to be more mature than their carbon emission disclosures (see Figure 10). This suggests that the significant momentum experienced by the carbon market may shift to nature and biodiversity once carbon becomes an everyday operational item. Non-regulated biodiversity disclosure requirements are, meanwhile, on the rise, as companies increasingly recognize the importance of transparency in their environmental impact reporting. The GRI 14: Mining Sector 2024 standard is one example of this; it aims to enhance the transparency, reliability, and comparability of sustainability reporting within the Mining industry by introducing more stringent data quality requirements. The standard mandates that organizations report on topics such as biodiversity, water usage, community impact, and emissions, as well as the methodologies and assumptions used during data collection and reporting. A common challenge identified by interview respondents is the difficulty in collecting accurate and comparable data across multiple sites, due to inconsistent collection techniques. Additionally, the complexities, uncertainties, and variabilities in ecological systems make it challenging to account for and predict the long-term effects of project development within predictive models.

#### FIGURE 10: Maturity of nature and biodiversity disclosures compared with carbon emission disclosures



#### Question: How do your firm's nature and biodiversity disclosures compare with your carbon emission disclosures?

I would say the most significant challenge that we face is developing internal capacity and expertise in biodiversity data collection, analysis, and management, particularly in cases where there is a need for more specialized knowledge and experience in ecological sciences and environmental management.

#### Corporate Manager - Risk Management: Infrastructure

Incomplete species inventories, out-of-date habitat maps, and a lack of baseline data for monitoring have presented difficulties in managing data uncertainties and limitations.

Vice President - Sustainability and EHS: Mining

# Establishing a digital architecture to meet data collection, management, and reporting needs should be high on the agenda

It is important for firms to establish an enterprise-wide ESG information architecture, to produce consistent, investor-grade data that are accurate, timely and auditable, to satisfy the data needs of environmental regulations and non-regulated nature and biodiversity disclosure standards. According to our survey, around 40% of organizations leverage software to collect, analyze, and disclose nature and biodiversity data, with threequarters of firms using ESG and sustainability software for regulatory compliance for these purposes (see Figure 11). Although software alone is not a silver bullet solution, having a robust digital strategy and implementing the right software tools will significantly enhance a firm's preparedness for upcoming regulatory and disclosure requirements. This preparedness ensures that firms can meet stringent reporting standards and respond efficiently to evolving environmental regulations.

#### FIGURE 11: Approaches to managing nature and biodiversity workflows





## Conducting regular audits will ensure the accuracy and reliability of data

An overreliance on manual data collection and management processes can introduce risks such as inefficient data management, excess use of resources, version control complexities, and potential inaccuracies due to human error. Eighty-two per cent of the organizations surveyed conduct internal data validation and audits, with 74% undertaking these in collaboration with external consultants and experts (see Figure 12). Internal data audits help to identify errors, inconsistencies, and process oversights relating to nature and biodiversity data, and ensure that processes across different departments and sites can be standardized. Seventyfour per cent of organizations are seeking external data assurance and verification, suggesting that companies are striving to hold nature and biodiversity data to the same standards as carbon accounting. This figure rises to 92% for firms in the Utilities sector.

#### FIGURE 12: Approaches to ensuring the accuracy and reliability of nature and biodiversity data



Question: How does your organization ensure the accuracy and reliability of nature and biodiversity-related data for

## Preparing early to ensure that the transition to reporting is well-managed is a key success factor

While all survey respondents held influence over nature and biodiversity-related projects, the survey found that only 30% of organizations have full visibility into the nature-related risks they face, and just 28% have full visibility into nature-related dependencies. Currently, there is no market consensus on measuring naturerelated dependencies and risks. As the TNFD framework encourages organizations to report on both their nature impacts and dependencies, this lack of visibility highlights the importance of early preparation. Furthermore, software and accompanying data governance processes take time to implement and refine.

# Businesses should start investing today to lay the groundwork for the future

## Firms need to start building the business case for nature-positive investments and educate the wider workforce today

Investing in nature-positive initiatives and enhancing the ecosystem services that are critical for sustainable operations is the first step in working towards a more nature-positive business. For instance, restoring wetlands and riparian buffers can significantly enhance water quality and availability, which are crucial for both industrial processes and community water supplies. However, developing a business case and obtaining funding for nature and biodiversity initiatives is a considerable challenge. Organizations should consider working with a service provider to develop the business case for nature-positive initiatives, leveraging the provider's industry expertise to benchmark performance against peers, provide insights into industry best practices, and help firms perform a top-down analysis of cost-effective and technically feasible decarbonization solutions, with appropriate timelines. Consulting firms can also educate internal stakeholders and bring muchneeded expertise to businesses looking to make a high impact with their investments.

## Firms that ensure that their advisory partner takes a science-based approach to nature and biodiversity will have a leg-up on the competition

Undertaking successful nature and biodiversity projects requires a deep understanding of the landscape – both natural and regulatory. Advisory partners should have the necessary breadth of expertise to guide an organization from initial baseline assessments, including comprehensive wildlife and aquatic evaluations, through to obtaining the relevant permits and developing mitigation and compensation plans. These plans should leverage up-to-date scientific techniques that are robust and defensible, ensuring compliance with regulatory standards today and tomorrow.

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