



A4S

ACCOUNTING FOR
SUSTAINABILITY



NATURE GUIDANCE

TOOL 2

Potential financial impacts
associated with nature-related
risks and opportunities

Potential financial impacts associated with nature-related risks and opportunities

Purpose

To help you to understand the potential financial implications of the nature-related risks and opportunities you have identified.

Options for use

- To strengthen your business case for taking action on nature by understanding the potential financial implications of inaction
- To help prepare disclosures in line with the TNFD recommendations

Instructions

1. Once you have identified your nature-related risks and opportunities, read the *Examples of nature-related risks and opportunities and their potential financial impacts*
2. Use the *Template for reviewing potential financial impacts from your nature-related risks and opportunities* to:
 - Identify the various potential financial impacts of the nature-related risks and opportunities in your organization, guided by the supporting questions
 - Consider how to estimate the size of each potential financial impact, either qualitatively or quantitatively

Practical tips



PRIORITIZE

Start with the types of risks that are likely to be the most material to your organization – these are the ones that decision makers are concerned about. These risks are likely to depend on your sector and the areas where you operate.



COLLABORATE

In order to assess the potential financial impacts of your nature-related risks and opportunities, you will need to understand the underlying nature-related issues. Work with your sustainability team to help identify the areas to focus on.



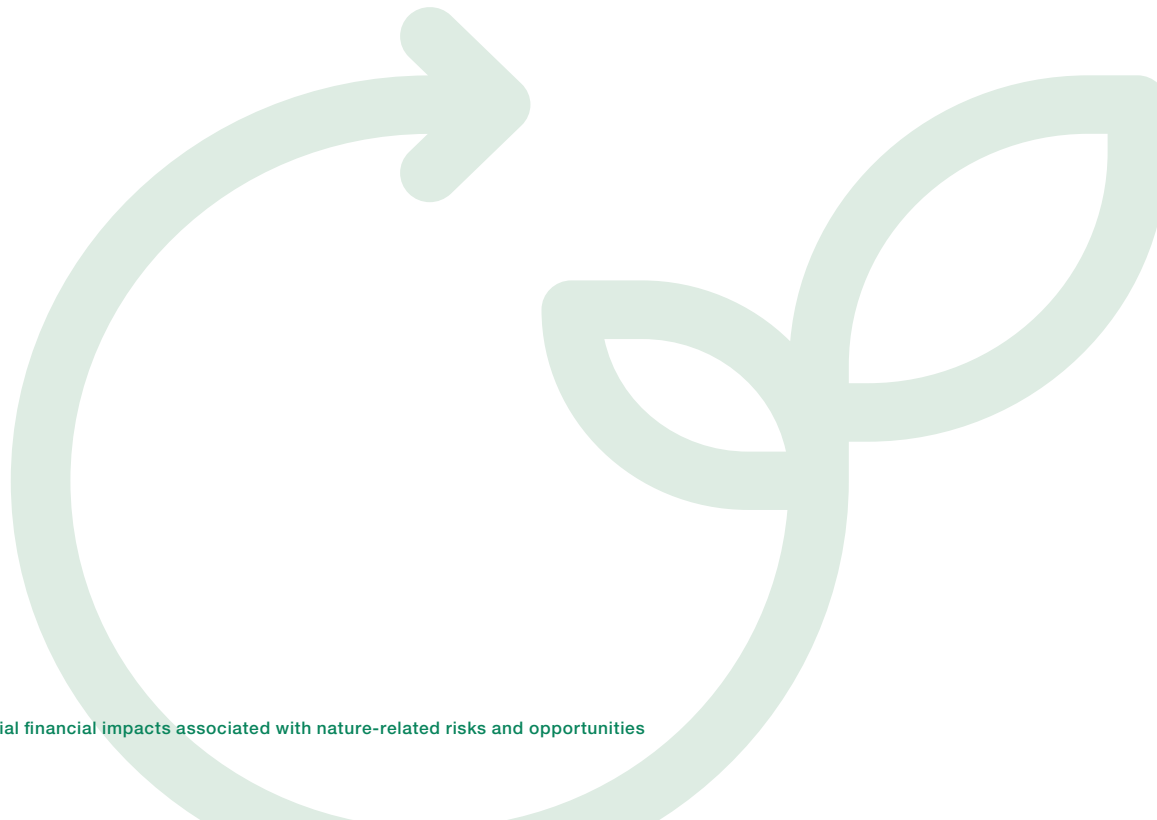
CONSIDER INTERACTIONS

When estimating the financial implications, you will need to balance different factors across a range of business areas, particularly the intersection with climate. Identify any synergies and trade-offs to get the best results.

Examples of nature-related risks and opportunities and their potential financial impacts

In order to make more informed financial decisions, you need to understand how your nature-related risks and opportunities are likely to affect your organization’s future financial position. These examples summarize potential financial impacts of various nature-related risks and opportunities to help you identify financial implications for your organization.

Type	Nature-related risks and opportunities	Potential financial impacts for your organization
Physical risks Result from the degradation of nature and the related loss of ecosystem services. Usually location-specific.	Acute Occurrence of short-term, specific events that change the state of nature and negatively affect the operating environment of your organization. For example, floods, landslides from deforestation, subsidence from mining or pest infestations affecting agriculture.	<ul style="list-style-type: none"> ● Property damage – costs related to the destruction of infrastructure and equipment, eg repair and redevelopment costs, increased insurance premiums ● Business interruption – loss of revenue due to temporary closure of operations or disruption in supply chains ● Clean-up costs – expenses associated with containing/cleaning up/restoration ● Insurance premiums – increased insurance premiums due to increasing frequency and severity of nature-related natural disasters, affecting profit margins for businesses in high-risk areas
	Chronic Gradual changes to the state of nature that affect your ability to operate. For example, pollution stemming from pesticide use, soil degradation, deterioration of ecosystem resilience, loss of natural pollinators or climate change.	<ul style="list-style-type: none"> ● Reduced productivity – decreased revenue output or efficiency losses ● Resource scarcity – increased costs and supply chain disruption due to depletion of natural resources, such as water, minerals, forest products, and fish and marine resources ● Market volatility – fluctuations in market prices due to changes in supply and demand caused by chronic environmental issues ● Health-related costs – increased medical expenses/insurance costs for treating employee illnesses and health issues related to chronic environmental pollution



Type	Nature-related risks and opportunities	Potential financial impacts for your organization
Transition risks Result from regulators, standard-setters, investors and other stakeholders pressuring businesses to account for their impacts on nature and to adopt nature-friendly practices.	Legal Liability risks arising from changes to regulations and to statutory and case law. As laws, regulations and case law related to your organization's preparedness for nature action evolve, the incidence or probability of contingent liabilities may increase.	<ul style="list-style-type: none"> ● Legal costs – costs from defending against legal claims linked to nature-related impacts ● Fines – increased costs from fines, penalties and any associated legal fees resulting from non-compliance with new laws and regulations ● Insurance – increased insurance premiums or difficulty in obtaining insurance coverage due to heightened nature-related liability risks ● Loss of contracts – reduced revenue from lost contracts or lost business opportunities due to liability concerns
	Policy Changes in the policy context due to new (or enforcement of existing) policies to create positive impacts on nature or mitigate negative impacts on nature.	<ul style="list-style-type: none"> ● Increased operating costs – higher expenses due to compliance costs and increased insurance premiums resulting from policy changes ● Write-offs and asset impairment – losses incurred from the early retirement or devaluation of existing assets due to policy changes
	Market Changing dynamics in overall markets, including changes in consumer and investor preferences or movement in market prices.	<ul style="list-style-type: none"> ● Decreased demand – reduced revenue from loss of demand for products and services that cause negative impacts on nature due to shifts in consumer preferences ● Increased production costs – higher expenses resulting from changing input prices (eg natural resources, water) and output requirements (eg waste treatment) due to nature-related factors, influenced by nature-related events such as resource scarcity ● Cost changes – market demands to move away from traditional fossil fuel-based plastics to more sustainable bioproducts have both cost and risk implications ● Re-pricing of assets – adjustments in the valuation of assets such as land or water rights due to changing market perceptions of nature-related risks and opportunities ● Increased cost/scarcity of capital – low ESG ratings due to negative impacts on nature may make it more difficult to gain access to finance or lead to a higher cost of capital ● Valuation impact – asset valuations potentially affected by nature-related risks, particularly for businesses heavily reliant on natural resources, eg forestry, food and beverage businesses operating in water-stressed areas
	Technology New products or services in the market that can reduce organizational impact or dependence on nature, such as a move to bioplastics that reduces your nature-related impact.	<ul style="list-style-type: none"> ● Reduced revenue – switch in demand to substitutions due to shifting market preference towards nature-friendly products ● Increased costs for R&D into nature-friendly technology – higher spending on nature-friendly technologies like biodegradable materials or renewable energy
	Reputational Changes in perception of your organization because of how you (or your industry) interact with nature (directly or through the value chain).	<ul style="list-style-type: none"> ● Reduced demand for products and services – decreased revenue from goods/services due to customer loyalty being negatively affected by perceptions of nature impact, and/or customers looking to reduce nature-related risks in their supply chains ● Employee attraction and retention – increased costs from difficulties in attracting and retaining employees due to reputational damage ● Reduced brand value – failure to act on nature-related risks can result in loss of brand value due to investor concerns about their own nature-related risks

Type	Nature-related risks and opportunities	Potential financial impacts for your organization
Systemic risks Result from the breakdown of the entire system, rather than the failure of individual parts.	Ecosystem stability Collapse of a critical natural ecosystem.	<ul style="list-style-type: none"> ● Breakdown of supply chain – ecosystem breakdown may result in collapse of supply chain, resulting in loss of revenue and costs to source elsewhere ● Inability to operate – local ecosystem collapse may lead to inability of local operations to operate, eg due to water shortages, leading to loss of revenue and significant asset write-downs
	Financial stability Collapse of an entire financial system.	<ul style="list-style-type: none"> ● Lack of access to finance – breakdown of a financial system leading to a lack of access to capital to meet financing needs (degree of impact will depend on global extent of collapse)
Business performance opportunities	Market factors Changing dynamics in overall markets, such as access to new markets or locations, can offer new business opportunities. These dynamics can arise from changes to consumer preference, consumer and investor sentiment, and stakeholder dynamics.	<ul style="list-style-type: none"> ● New markets – increased revenue from access to new markets or locations resulting from changes in consumer demands for nature-friendly products ● Increased market share – expansion of customer base, improved market positioning and competitive advantage, potentially resulting in higher market share ● New revenue streams – potential to use former waste products as a primary resource as part of a move towards circular economy dynamics, particularly as resource scarcity increases and recycling technology improves such that the market value of waste rises ● Enhanced brand value – can lead to improved relations with employees, suppliers and customers, which can ultimately lead to lower costs and/or higher revenues ● Improved employee wellbeing – potential to increase employee recruitment, retention and productivity by providing employees with green/biodiverse spaces and opportunities to interact with nature for meetings, recreation and team building
	Resource efficiency Efficiencies can come from moving towards circular economy principles, using fewer natural resources while improving operational efficiency, or reducing costs. An example is micro-irrigation, which maximizes plant health, reduces water use and reduces costs.	<ul style="list-style-type: none"> ● Cost savings – reduced consumption of natural resources, such as water and energy, leading to lower operational expenses ● Increased operational efficiency and productivity – streamlined processes and resource-efficient technologies leading to lower operating costs, for example innovative production models eg agroforestry can provide financial and nature-related benefits ● Reduced waste – potential lower waste disposal costs as resources are reused, recycled or resold where possible
	Products and services You can create value by developing or delivering products and services that protect, manage or restore nature, including technological innovations.	<ul style="list-style-type: none"> ● New product lines – potential for increased revenue from the sale of nature-friendly products and services catering to growing consumer demand ● Innovation – opportunities for innovation and product diversification, leading to new revenue streams and business growth ● Premium pricing – competitive advantage and differentiation in the market, allowing for premium pricing and increased market share ● Reputation benefits – enhanced customer loyalty and brand reputation, driving repeat purchases and positive word-of-mouth marketing
	Capital flows and financing Generating positive impacts on nature or mitigating your negative impacts can enable you to gain access to capital markets and improved financing terms or financial products.	<ul style="list-style-type: none"> ● Improved access to capital – increased appeal with investors, potentially leading to improved access to capital including through sustainability-linked bonds or loans ● Lower cost of capital – lowering your overall organizational risk potentially leading to lower cost of capital
	Reputational capital Taking action on nature can change perceptions of your organization's positive nature-related impacts, which can raise your reputation and credibility for a range of stakeholders including consumers, investors and the wider public.	<ul style="list-style-type: none"> ● Strengthened relationships – improved perception of business by stakeholders (including customers, employees and communities), resulting in increased brand loyalty and customer retention and associated increase in brand value ● Improved employee morale and productivity – lower turnover rates and higher employee engagement, reducing HR costs

Type	Nature-related risks and opportunities	Potential financial impacts for your organization
Sustainability performance opportunities	<p>Sustainable use of natural resources You can identify opportunities in your value chain to use recycled, regenerative, renewable or responsibly sourced inputs rather than extracting new natural resources. This puts less pressure on natural resources.</p>	<ul style="list-style-type: none"> ● Cost savings – reduced reliance on unsustainable natural resources, which may lead to lower procurement and operational expenses in the future ● Increased operational efficiency – increased resilience to resource scarcity or price fluctuations
	<p>Ecosystem protection, restoration and regeneration You can engage in activities that support the protection, restoration or regeneration of habitats and ecosystems, including areas both within and beyond your organization’s direct control.</p>	<ul style="list-style-type: none"> ● Resilient supply chains – reduced costs associated with environmental damage and degradation, such as soil erosion, water pollution and habitat destruction ● Ecosystem services – potential revenue generation from ecosystem services such as carbon sequestration, flood defence, water filtration and biodiversity conservation ● Climate change – enhanced resilience to climate change impacts, leading to lower risk of business disruption and financial losses, and helping to meet organizational climate change targets¹ ● Improved stakeholder relations and community engagement – fostering positive brand image and goodwill and associated increases in brand value



1. For example, Scottish Power has invested in peatlands restoration as a nature-based solution for carbon storage, supporting the organization to meet its climate goals. See: Scottish Power, [Onshore ecology and peatland restoration](#) [webpage]. Accessed: 30 September 2024

Template for reviewing potential financial impacts from your nature-related risks and opportunities

Below you will find some questions to help you identify the potential financial implications of your nature-related risks and opportunities. For all risk and opportunity areas, you should reflect on whether your organization, your peers or your competitors have previously been affected by any of these, and consider the estimated financial implications.

Once you have identified the potential financial impacts for your organization, you may wish to consider possible ways to quantify these for decision makers. Depending on your needs and the information available, you may opt for relatively high-level qualitative measures or more detailed quantitative analysis. For example:

Qualitative

- Risks – heatmaps
- Risks – likelihood/impact squares

Quantitative

- Risks – value at risk from factors such as loss or damage to assets, stranded assets
- Risks – size of potential fines or penalties
- Risks – cost–benefit analyses
- Opportunities – value of any projected new revenue streams

Type	Nature-related risks and opportunities	Questions to ask	Potential financial impacts for your organization	Ideas for how to quantify
Physical risks	Acute Occurrence of short-term, specific events that change the state of nature and negatively affect the operating environment of your organization. For example, floods, landslides from deforestation, subsidence from mining or pest infestations affecting agriculture.	<ul style="list-style-type: none"> ● Have you suffered from an acute event previously? What were the related financial implications? ● Do you operate in locations that are particularly vulnerable to eg forest fires or floods? What assets or supply chains are located there? ● Do your local impacts on biodiversity risk damaging the ecosystem assets and services on which you rely? 		
	Chronic Gradual changes to the state of nature that affect your ability to operate. For example, pollution stemming from pesticide use, soil degradation, deterioration of ecosystem resilience, loss of natural pollinators or climate change.	<ul style="list-style-type: none"> ● Are you currently experiencing any negative effects from chronic impacts on nature? How might these increase in the future? ● Are you particularly reliant on specific locations or ecosystems within your own operations or supply chain? Are these locations or ecosystems threatened by chronic impacts on nature? 		

Type	Nature-related risks and opportunities	Questions to ask	Potential financial impacts for your organization	Ideas for how to quantify
Transition risks	<p>Legal Liability risks arising from changes to regulations and to statutory and case law. As laws, regulations and case law related to an organization's preparedness for nature action evolve, the incidence or probability of contingent liabilities may increase.</p>	<ul style="list-style-type: none"> ● Have you previously suffered fines, permit refusals or legal challenges relating to your relationship with nature? What were the financial implications of these? How are these likely to change going forward? ● Are you planning or currently operating projects in high biodiversity or ecologically sensitive areas, or that are likely to have a significant negative impact on nature? Are these projects at risk from legal challenges? 		
	<p>Policy Changes in the policy context due to new (or enforcement of existing) policies to create positive impacts on nature or mitigate negative impacts on nature.</p>	<ul style="list-style-type: none"> ● Do you operate in jurisdictions with an increasing focus on nature-related policies? Are you likely to be compliant when these come into force? ● Are you aware of policies relating to your supply chain, eg the EU Regulation on Deforestation-free Products? ● Are you prepared for future nature-related reporting regulations? 		
	<p>Market Changing dynamics in overall markets, including changes in consumer and investor preferences or movement in market prices.</p>	<ul style="list-style-type: none"> ● What are the trends in your sector – are you seeing a move towards more nature-friendly products? Is this driven by consumer or investor pressure? ● What questions are you receiving from investors on nature? What areas do their ESG questionnaires focus on? 		
	<p>Technology New products or services in the market that can reduce organizational impact or dependence on nature, such as a move to bioplastics that reduces your nature-related impact.</p>	<ul style="list-style-type: none"> ● Are your competitors taking advantage of nature-friendly technologies? Are these likely to lead to competitive pressures? ● Are other sectors advancing in areas that your competitors may start to apply? 		
	<p>Reputational Changes in perception of your organization because of how you (or your industry) interact with nature (directly or through the value chain).</p>	<ul style="list-style-type: none"> ● Have you previously suffered reputational damage from negative impacts on nature? Have your peers? What were the financial consequences? ● Do you understand the risks relating to your supply chain, eg might suppliers be involved in deforestation? 		

TOOL 2

Type	Nature-related risks and opportunities	Questions to ask	Potential financial impacts for your organization	Ideas for how to quantify
Systemic risks	Ecosystem stability Collapse of a critical natural ecosystem.	<ul style="list-style-type: none"> ● Are you reliant on a small number of locations/ecosystems? Can you secure or replace access to natural resources and ecosystem services from other locations? ● Are there alternative natural resources or products you can use? 		
	Financial stability Collapse of an entire financial system.	<ul style="list-style-type: none"> ● How can you best secure access to capital? ● Are you vulnerable to the collapse of a specific financial market? 		

Type	Nature-related risks and opportunities	Questions to ask	Potential financial impacts for your organization	Ideas for how to quantify
Business performance opportunities	Market factors Changing dynamics in overall markets, such as access to new markets or locations, can offer new business opportunities. These dynamics can arise from changes to consumer preference, consumer and investor sentiment, and stakeholder dynamics.	<ul style="list-style-type: none"> ● What market trends are you seeing in your sector? Is there an increasing demand for products or services with a lower impact on nature? ● What questions/trends are you seeing from investors? ● How could employee wellbeing be improved by facilitating access to nature? 		
	Resource efficiency Efficiencies can come from moving towards circular economy principles, using fewer natural resources while improving operational efficiency, or reducing costs. An example is micro-irrigation, which maximizes plant health, reduces water use and reduces costs.	<ul style="list-style-type: none"> ● Are there areas where operational efficiencies can be increased to reduce natural resource use, particularly those which are likely to increase in scarcity? Or areas where waste products could be reused in the production process to increase circularity? 		
	Products and services You can create value by developing or delivering products and services that protect, manage or restore nature, including technological innovations.	<ul style="list-style-type: none"> ● Is your R&D team considering how to develop products or services to reduce negative or increase positive impacts on nature? Are your peers? 		
	Capital flows and financing Generating positive impacts on nature or mitigating your negative impacts can enable you to gain access to capital markets and improved financing terms or financial products.	<ul style="list-style-type: none"> ● Have you discussed with your investors what their expectations are regarding nature? Have you considered financing activities through sustainability-linked bonds or loans or green bonds? ● Have your peers benefited from sustainability-linked bonds or loans or green bonds linked to nature? 		
	Reputational capital Taking action on nature can change perceptions of your organization's positive nature-related impacts, which can raise your reputation and credibility for a range of stakeholders including consumers, investors and the wider public.	<ul style="list-style-type: none"> ● Are your peers benefiting from marketing relating to reducing their negative impacts on nature? 		

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Sustainability performance opportunities	<p>Sustainable use of natural resources You can identify opportunities in your value chain to use recycled, regenerative, renewable or responsibly sourced inputs rather than extracting new natural resources. This puts less pressure on natural resources.</p>	<ul style="list-style-type: none"> ● Can you revisit your production processes to increase efficiencies? ● Are there ways to achieve the same operational outcomes using fewer resources – with a particular focus on scarce resources and resources sourced from high biodiversity/sensitive areas? 		
	<p>Ecosystem protection, restoration and regeneration You can engage in activities that support the protection, restoration or regeneration of habitats and ecosystems, including areas both within and beyond your organization’s direct control.</p>	<ul style="list-style-type: none"> ● Would investing in local ecosystems/ ecosystems in your supply chain help to secure these environmental assets into the future? Would this help to secure your supply chain? ● Can you link this to your climate change targets, eg through investment in nature-based solutions? 		