



NATURE SCENARIO ANALYSIS FOR RESILIENT BUSINESS AND FINANCE

ACCELERATING UPTAKE: A BRIEFING

JULY 2025



CONTENTS



Use our interactive PDF to
navigate easily through chapters

1. INTRODUCTION	3
Scope of this briefing	4
Why should businesses and financial institutions use nature scenario analysis?	4
Business applications of nature scenario analysis and relevant business functions	6
2. CURRENT USE OF NATURE SCENARIO ANALYSIS IN THE UK	7
3. ACTIONS TO ACCELERATE UPTAKE OF NATURE SCENARIO ANALYSIS	9
Action area 1: Making the case for nature scenario analysis	10
Action area 2: Demystifying nature scenario analysis and building knowledge and capacity	10
Action area 3: Developing the framework for nature scenario analysis	11
Action area 4: Data, models and tools for nature scenario analysis	12
4. CONCLUSIONS AND NEXT STEPS	14
ANNEXES	16
Annex 1: Policy and regulation, frameworks and standards, and models, tools and guidance for nature scenario analysis	16
Annex 2: High-level principles for nature scenario analysis	17
Annex 3: Background on the nature scenarios project	18
ACKNOWLEDGEMENTS	19

1. INTRODUCTION



1. INTRODUCTION

BACKGROUND

Businesses and capital providers are increasingly concerned with understanding and managing nature-related dependencies, impacts, risks and opportunities, which can have a material impact on financial performance and outlook (as well as implications for the environment, economy and society). Scenario analysis can play a key role in this process, providing insights into how nature-related risks and opportunities might evolve in the future, helping to inform risk management, strategy and reporting.

This approach – termed ‘nature scenario analysis’ in this briefing – is therefore a valuable part of the toolkit for accounting and finance professionals, whose roles centre around managing financial risk and enhancing business resilience and value. However, few businesses or financial institutions are making use of such an approach, despite the many benefits it can provide.

To help address this gap, ICAEW and the Pentland Centre for Sustainability in Business at Lancaster University have collaborated on a project to help build knowledge and capacity in the use of nature scenario analysis by businesses, financial institutions and the wider accounting profession, and to explore ways to accelerate uptake in the market.

SCOPE OF THIS BRIEFING

This briefing, developed by ICAEW, is part of the ICAEW-Pentland Centre project and outlines the state of play on nature scenario analysis for key sectors in the UK. It identifies four broad areas of action to accelerate uptake by businesses and financial institutions:

1. Making the case for nature scenario analysis.
2. Demystifying nature scenario analysis and building knowledge and capacity.
3. Developing frameworks for nature scenario analysis.
4. Models, tools and data for nature scenario analysis.

Within each of these four areas, the paper identifies barriers and challenges, and suggests a set of specific actions.

The briefing has been developed based on views shared by participants at a series of roundtable discussions organised by ICAEW (these are not necessarily views or positions held by ICAEW). Participants included representatives from businesses, financial institutions, market service providers, research agencies and other organisations.

Annexes 1 to 3 provide further relevant background material related to the project, as follows:

1. Overview of the policy and regulatory landscape context, existing standards and frameworks, and methods, tools and guidance.
2. High-level principles for nature scenario analysis.
3. Background to the ICAEW-Pentland Centre project.

Readers are also directed to other briefing materials on this topic produced as part of this project by the Pentland Centre.¹

WHY SHOULD BUSINESSES AND FINANCIAL INSTITUTIONS USE NATURE SCENARIO ANALYSIS?

Nature underpins our economies and societies. However, it is being degraded faster than at any time in human history. Most of the services nature provides, and on which our economies depend, are declining. This poses growing physical risks to businesses and financial institutions.

As international efforts to reverse nature loss accelerate, transition risks to businesses are also multiplying. The world’s governments have agreed goals and targets within the Kunming-Montreal Global Biodiversity Framework (GBF) to halt the loss of and restore biodiversity. Governments and supra-national bodies (notably the EU) are also increasingly establishing domestic policies to reverse biodiversity loss and promote nature-positive economic activity. The expectations of regulators, capital providers and consumers are also shifting towards corporate responsibility for nature and improved transparency. Additionally, new technologies are increasingly

¹ [Ciftci et al \(2024\) Scenarios analysis: a Primer](#). Pentland Centre for Sustainability in Business, Lancaster University

“Nature underpins our economies and societies. However, it is being degraded faster than at any other time in human history. Most of the services nature provides, and on which our economies depend, are declining”

disrupting markets. Organisations that fail to adapt face increased costs, missed market opportunities, regulatory penalties or reputational damage.

Many businesses and financial institutions have already started to identify, assess and report on their nature-related risks and opportunities, eg, in line with recommended disclosures and guidance produced by the Task Force on Nature-Related Financial Disclosures (TNFD).² However, most efforts have to date focused on current risks and opportunities. Few have considered how these risks and opportunities may change in the future. This is where nature scenario analysis comes in and is critical to effectively managing risk and informing strategic planning to ensure medium- and longer-term resilience.

Box 1 provides definitions of key terms used in this briefing, and Box 2 outlines the range of business functions that might engage with nature scenario analysis.

BOX 1: DEFINITIONS

Nature: The natural world, with an emphasis on the diversity of living organisms (including people) and their interactions among themselves and with their environment.³

Biodiversity (or biological diversity): 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.⁴

Nature scenario: A hypothetical but plausible narrative on future changes in the natural environment, analogous to a climate scenario (such as those developed by the IPCC), which offers plausible narratives on future changes in the climate. Given that the climate is one aspect of nature, nature scenarios are increasingly expected to integrate climate scenarios.

Scenario analysis: A strategic planning tool that originated in the application of future thinking in military contexts and has increasingly been applied in corporate settings. Scenario analysis helps organisations analyse risks and opportunities related to future scenarios.

Nature (or nature-related) scenario analysis: Allows organisations to explore the possible consequences of nature loss and climate change, the ways in which governments, markets and society might respond, and the implications of these uncertainties for business strategy and financial planning.

² TNFD (2024) [Taskforce on Nature-related Financial Disclosures Recommendations](#) and TNFD (2024) [Guidance on the identification and assessment of nature-related issues: the LEAP approach](#)

³ TNFD (2025) [Glossary, V3.0](#). TNFD, London

⁴ [Convention on Biological Diversity, Art. 2](#)



BUSINESS APPLICATIONS OF NATURE SCENARIO ANALYSIS AND RELEVANT BUSINESS FUNCTIONS

A series of sector roundtables convened by ICAEW ([see Annex 3](#)) has identified a wide range of potential business applications of nature scenario analysis. These include incorporation of nature-related risks and opportunities into:

- Risk assessment, management and mitigation;
- business strategy and business planning;
- supply chain engagement and management;
- operational decision-making;
- financial analysis and planning;
- management and financial accounting;
- asset management;
- reputation management; and
- mandatory and voluntary reporting and disclosure.

The roundtables also identified a wide range of business functions for which nature scenario analysis may be of relevance and which should be considered for involvement in nature scenario analysis (Box 2).

BOX 2: BUSINESS FUNCTIONS TO ENGAGE IN NATURE SCENARIO ANALYSIS

Nature scenario analysis is of relevance to, and can be applied with the involvement of, a wide range of functions within businesses and financial institutions, including:

- Board
- C-suite
- Corporate strategy
- Divisional heads
- Risk management
- Finance
- Portfolio management
- Legal
- Design (eg, construction and built environment)
- Internal audit
- Operations
- Supply chain procurement (eg, individual farm businesses)
- Environmental, social and governance (ESG)
- Training and continuing professional development (CPD)

2. CURRENT USE OF NATURE SCENARIO ANALYSIS IN THE UK



2. CURRENT USE OF NATURE SCENARIO ANALYSIS IN THE UK

Boxes 3 to 5 outline selected views shared by roundtable participants on the current state of play on nature scenario analysis in key UK industry sectors.

BOX 3: FOOD AND BEVERAGE SECTOR (WITH LAND MANAGEMENT)



- Some larger manufacturers and retailers are assessing their *current* nature-related impacts and dependencies (with increasing uptake of natural capital accounting), but there is limited uptake of nature scenario analysis to date.
- The approach is increasingly being applied in farm-level assessments. Increasingly granular data is available at farm enterprise scale and new tools are emerging to support bottom-up approaches to assessments and scenario analysis.
- There is growing interest in the potential for nature-related markets. Investment in nature-based solutions is expected to continue to increase, which may have a significant impact on the land management sector.

BOX 4: INFRASTRUCTURE AND BUILT ENVIRONMENT SECTOR



- Major linear infrastructure companies as well as larger construction companies have developed biodiversity strategies, applied natural capital accounting and/or run basic TNFD assessments. These approaches may to some extent address aspects of nature scenario analysis.
- Smaller construction and house-building companies are focused on least cost and cannot give time to biodiversity considerations.
- The water sector is just starting on basic TNFD assessments of current impacts and dependencies and has not yet analysed future scenarios.

BOX 5: FINANCE SECTOR (BANKING, ASSET MANAGEMENT, INSURANCE)



- While most financial institutions have not yet used nature scenarios, there is an appetite to do so, particularly where nature-related risks are significant. At least one big UK bank is working on nature scenario analysis, while banks in continental Europe are using nature scenario analysis to engage with farmers.
- Most financial institutions are focused on basic TNFD assessments, with around 50% doing a first high-level materiality assessment, 40% having completed this and digging into key dependencies and impacts, and 10% already thinking about materiality. Banks have multiple touchpoints with nature, making it challenging to understand overall risk exposure.
- Financial institutions will need to report on nature-related issues across the whole supply chain in the next two to three years. Many are trying to understand how to navigate this and how to optimise reporting and disclosure.
- For financial institutions, the Network for Greening the Financial System (NGFS) is seen as the authoritative voice in this regard. Financial institutions are awaiting further NGFS outputs, building on the NGFS *Recommendations toward the development of scenarios for assessing nature-related economic and financial risks* (December 2023).⁵ This is expected to produce normative holistic climate and nature scenarios.

⁵ NGFS publishes a [Technical Document providing recommendations for the development of nature-related scenarios](#)

3. ACTIONS TO ACCELERATE UPTAKE OF NATURE SCENARIO ANALYSIS



3. ACTIONS TO ACCELERATE UPTAKE OF NATURE SCENARIO ANALYSIS

This section describes key barriers and challenges to the use of nature scenario analysis by businesses and financial institutions, and potential actions that might be taken to overcome these and accelerate uptake. The barriers and challenges, and related actions, are derived from the views of roundtable participants and are organised in four areas:

1. Making the case for nature scenario analysis
2. Demystifying nature scenario analysis and building knowledge and capacity
3. Developing the framework for nature scenario analysis
4. Data, models and tools for nature scenario analysis

ACTION AREA 1: MAKING THE CASE FOR NATURE SCENARIO ANALYSIS

Barriers/challenges

- **Nature scenario analysis may not be perceived as a sufficiently urgent and/or a material issue to businesses and financial institutions** (this also applies to nature-related issues more generally).
- **Insufficient understanding of the benefits that applying nature scenario analysis can generate for businesses and financial institutions**, and consequent lack of support and resources for uptake.
- **Perception that it may be risky to disclose the outputs from nature scenario analysis** – for example, because of fears that they may influence the perceptions of investors (if they identify new or increased financial risks), consumers and the public (if they highlight increasing business impacts or lead to accusations of greenwashing) and regulators (if they lead to regulatory sanctions or trigger new or more stringent regulations).
- **Competition for limited resources**, particularly given existing broader sustainability reporting and disclosure requirements, including stretched sustainability teams and limited time to engage from senior leadership.

Specific actions

- **Develop an ‘elevator pitch’ for nature scenario analysis**, outlining: the urgency for action to protect and restore nature; business impacts and dependencies on nature; nature-related risks to value chains/portfolios; the potential to identify nature-related opportunities; the purpose and benefits (value added) of applying nature scenario analysis; and what nature scenario analysis involves. Adapt the pitch to key sectors and specific audiences (eg, C-suite, shareholders, asset-level).
- **Develop a clear business case for allocation of the resources needed to undertake nature scenario analysis** (and to ensure the outputs are applied and used effectively), within businesses and financial institutions, and within knowledge/data providers (including relevant government agencies such as the Joint Nature Conservation Committee).
- **Engage accounting and finance professionals in the use of nature scenario analysis**, given their important role in connecting sustainability and financial information within businesses. (ICAEW members include accountants working in both business and practice and have wide reach across the economy, including within FTSE100 companies.)

ACTION AREA 2: DEMYSTIFYING NATURE SCENARIO ANALYSIS AND BUILDING KNOWLEDGE AND CAPACITY

Barriers/challenges

- **Nature scenario analysis may be opaque, or perceived as difficult, to businesses and financial institutions.** Its connection to the finance function may also not be clear to accounting and finance teams.
- **Businesses and financial institutions often lack in-house knowledge, skills and capacities** for nature scenario analysis (and integrating this with climate scenario analysis) and its application to decision-making.
- **The accounting mindset remains focused on debit/credit accounting.** Businesses (and accountants) may find it challenging to translate nature-related impacts and dependencies to quantifying effects on costs and revenues, ie, there is a challenge to integrate impacts and dependencies on nature with materiality assessments, and to work out how to speak to the market on related risks.

Specific actions

- **Develop targeted new learning materials on nature scenario analysis** (eg, guidance, case studies), leveraging what's in the market already (eg, the TNFD's guidance on use of scenarios⁶). Guidance could focus on specific users/stakeholder groups (eg, boards and C-suite), organisation types (eg, small and medium-sized companies/firms) and/or issues (eg, how to deal with tipping points in nature within scenario analysis).
- **Develop skills and capacity in undertaking and applying nature scenario analysis to decision-making**, including through leveraging existing skills/experience in climate scenario analysis and application, targeted training, and creation of opportunities for peer-to-peer exchange and learning (this could also be supported by creating a new online platform or leveraging an existing one).
- **Change the accounting mindset**, from debit/credit accounting to including information on nature in accounting⁷, and provide clear principles and step-by-step guidance for accountants including on how to integrate nature-related impacts and dependencies with materiality assessments.
- **Scale up piloting of nature scenario analysis by individual businesses and financial institutions**, and publish the results and lessons learned. Pilots could help, for example, to demonstrate (a) the added value of nature scenario analysis (beyond what companies are already doing to mitigate nature-related impacts and risks); (b) how to conduct nature scenario analysis in practice in different contexts; and (c) how to translate nature scenario analysis output into decision-useful insights (eg, for business strategy, financial planning and analysis, investment portfolio risk screening).
- **Pilot sector-level nature scenario analysis at UK scale**, to help support individual organisations' own scenario planning exercises. Specific sectors (eg, infrastructure and built environment) share many common natural resource dependencies, impacts, risks and opportunities. Collaborating on national sector-level analyses (leveraging existing global efforts on sector transitions, such as work by WEF⁸) could generate useful outputs and insights that would give individual organisations a head start.

ACTION AREA 3: DEVELOPING THE FRAMEWORK FOR NATURE SCENARIO ANALYSIS

Barriers/challenges

- **Lack of standards and globally accepted principles for nature scenario analysis.** This undermines quality and consistency across the market and creates challenges for assurance.
- **Lack of established and available normative nature scenarios for businesses and financial institutions to use.** For climate, the 'net zero by 2050' target is widely used as a normative scenario. However, there are multiple global nature targets (eg, under the Global Biodiversity Framework⁹) and numerous national nature targets in the UK (eg, in the UK National Biodiversity Strategy and Action Plan¹⁰), making identification of an appropriate normative nature scenario challenging for organisations.
- **Consideration of climate-nature linkages in scenario analysis is challenging**, both in relation to physical risk drivers and transition risk drivers. Organisations will increasingly need to shift towards integrated climate and nature scenario analysis to support disclosures.
- **Actions that businesses may take based on the use of nature scenario analysis tend to be spatially fragmented.** Protection and restoration of nature needs to take place at ecologically meaningful scales, such as catchment or landscape scale. The application of nature scenario analysis by one business in isolation from others operating in the same area may mean that any actions taken may have limited benefit for nature.

Specific actions

- **Develop standards for nature scenario analysis**, allowing for comparable results across businesses and financial institutions. Sector standards may be needed, reflecting the specific nature-related issues typical of different sectors. Standards could also help to define the broad 'building blocks', including key types of physical and transition risk drivers to consider. For example, the TNFD *Discussion paper on advanced scenario analysis*¹¹

⁶ For example: [TNFD \(2024\) Guidance on scenario analysis](#)

⁷ For example: [ICAEW guidance on connecting sustainability and finance](#)

⁸ World Economic Forum - [Nature-positive industry sector transitions](#)

⁹ [Kunming-Montreal Global Biodiversity Framework](#)

¹⁰ [UK national biodiversity strategy and action plan - GOV.UK](#)

¹¹ [TNFD Discussion paper on conducting advanced scenario analysis](#)



suggests parameters that might be used for both physical risk (eg, land use change, water stress, pollination) and transition risk (eg, protected areas policy, mandatory disclosures, obligations for remediation of impacts). Standards could also define how to consider integration of nature and climate scenarios.

- **Develop a clear set of globally applicable guiding principles for nature scenario analysis**, to help support businesses and financial institutions in applying nature scenario analysis standards, and to further enhance uptake and consistency across the market.
- **Develop normative scenarios for nature**, which businesses and financial institutions can use and adapt as part of their own scenario analysis process. Scenarios could build on and be aligned with ongoing work to develop sector nature transition pathways in the UK and globally.^{12, 13} There may be a role for government arms-length bodies (eg, Joint Nature Conservation Committee (JNCC)) to set a national transition pathway for nature, equivalent to the role played by the UK Climate Change Committee (UKCCC) in feeding into the government's Net Zero Strategy.¹⁴ Aligning nature transition pathways with climate transition pathways might also facilitate uptake and encourage integrated thinking (businesses and financial institutions are already accustomed to working with climate scenarios). At the EU level, the European Green Deal¹⁵ and related policies (Biodiversity Strategy to 2030¹⁶, Farm to Fork Strategy¹⁷, etc) could also inform what sector transitions might look like.
- **Pilot landscape- or catchment-scale approaches to nature scenario analysis**, involving multiple businesses across multiple sectors. Landscape Enterprise Networks (LENS)¹⁸ bring together businesses at landscape scale to implement nature-based solutions and may be well-positioned to support such an approach.

¹² WEF [Sector Transitions to Nature Positive](#)

¹³ Ellis, K. & Gkoumas, V. (2024) [National nature-positive pathways to guide policy and private sector action](#), WWF UK

¹⁴ [Net Zero Strategy](#)

¹⁵ COM/2019/640 Final. [The European Green Deal](#). European Commission

¹⁶ COM/2020/380 Final. [EU Biodiversity Strategy for 2030 Bringing nature back into our lives](#). European Commission

¹⁷ COM/2020/A [Farm to Fork Strategy](#)

¹⁸ [Building business partnerships for resilient landscapes](#)

ACTION AREA 4: DATA, MODELS AND TOOLS FOR NATURE SCENARIO ANALYSIS

Barriers/challenges

- **Challenges around models.** Models take time to build in-house and there are related knowledge and capacity-building challenges in terms of data input, and model validation issues. Consultancies tend to offer ‘black box’ solutions, but corporates and financial institutions (and assurers) need to understand how they work and the assumptions used. Models are not yet sufficiently developed to underpin quantitative scenario analysis. Global models and over-aggregation are of limited use in managing exposures and identifying opportunities. Tools such as IBAT¹⁹, GLOBIO²⁰, ENCORE²¹ and EXIOBASE²² don’t give the necessary granularity for business models and supply chains. The level of granularity needed to deliver decision-useful results may be costly.
- **Biodiversity data limitations.** There is frustration in the finance sector, corporates and supply chains with the lack of a standardised approach to collecting biodiversity data. Baselines, and how to address biodiversity tipping points, are a big challenge.

Specific actions

- **Develop tools to help businesses and financial institutions apply nature scenario analysis,** which also help locate relevant data (eg, for transition risk, physical risk and different ecosystem services) and produce actionable insights (eg, heatmaps or other visualisations of changing impacts and dependencies over time).

- **Develop new models to support nature scenario analysis,** including models for quantitative analysis (that provide sufficient granularity) and integrated climate-nature models for integrated climate-nature scenario analysis.
- **Encourage businesses and financial institutions to leverage existing internal data across teams/departments** (strategy, risk, sustainability, finance, accounting, operations, etc) before pursuing additional data collection efforts.
- **Enhance access to relevant data, tools and technology** including geo-located, scalable data, better ground-truthing, and tools tailored to local ecological conditions to address supply chains in different countries. Enhance flow of biodiversity information between public and private sectors (eg, building on work being led by UNEP-WCMC under the EU project A-Track²³).
- **Enhance use of proxy indicators for biodiversity.** Analysis of impacts and dependencies on biodiversity specifically is challenging and data intensive. When applying TNFD’s LEAP²⁴ approach, proxy indicators can be used to streamline the process (eg, water quality can be used as an indicator of an organisation’s impact on biodiversity).
- **Develop a nature-focused equivalent of PACTA²⁵,** an open-source tool that allows users to measure the alignment of financial portfolios with climate scenarios and analyse specific companies.
- **Explore how artificial intelligence (AI) might support nature scenario analysis,** to help identify decision-useful insights, as well as to improve analytical efficiency (and free up capacity and resources that can be used elsewhere).

¹⁹ [IBAT](#)

²⁰ [Global Biodiversity Model for Policy Support \(GLOBIO\)](#)

²¹ [ENCORE](#)

²² [EXIOBASE](#)

²³ [A-Track](#)

²⁴ [Guidance on the identification and assessment of nature-related issues: the LEAP approach](#)

²⁵ [PACTA](#)

4. CONCLUSION AND NEXT STEPS



4. CONCLUSION AND NEXT STEPS

With the increase in physical risks arising from nature loss, and the continuing evolution of regulatory and market expectations to address these issues, businesses and financial institutions will need to go beyond considering their current nature-related risks and opportunities, to understand how these may change in the future.

Nature scenario analysis can play a key role in this process. However, to date, few businesses or financial institutions are using the approach.²⁶ There is thus an urgent need to accelerate uptake of nature scenario analysis.

This paper has outlined a range of barriers and challenges in this regard and identifies specific actions that might be taken to accelerate uptake, organised in four broad areas of action. Businesses, financial institutions, the accounting profession and organisations, including the Taskforce on Nature-related Financial Disclosures (TNFD), Network for Greening the Financial System (NGFS), Global Reporting Initiative (GRI) and others can all play a role in working together to take forward these actions.

ICAEW is committed to providing its members with the training, support and infrastructure to value and embed nature in decision-making and disclosure across the economy. ICAEW will consider how it can best build on this work on nature scenario analysis and engage with others to move forward on the areas of action identified. ICAEW welcomes interest from other organisations in collaborating to advance this agenda.

“ICAEW is committed to providing its members with the training, support and infrastructure to value and embed nature in decision-making and disclosure across the economy”

ICAEW members are also encouraged to continue to build their knowledge on nature scenario analysis and how to apply it by exploring relevant policies, regulations, frameworks, standards, tools and guidance ([see Annex 3](#) for an overview).

Members can also enrol on the e-learning module *Systems thinking and scenario analysis for sustainability*, offered under ICAEW's CPD programme.²⁷ This course provides a step-by-step guide to conducting scenario analysis, helping you assess the resilience of your organisation's strategies while minimising implementation costs.

²⁶ [Ciftci et al \(2024\) Scenario analysis: a Primer](#). Pentland Centre for Sustainability in Business, Lancaster

²⁷ [ICAEW Sustainability Accelerator Programme](#)

ANNEXES

ANNEX 1: POLICY AND REGULATION, FRAMEWORKS AND STANDARDS, AND MODELS, TOOLS AND GUIDANCE FOR NATURE SCENARIO ANALYSIS

Policy and regulation

- [Kunming-Montreal Global Biodiversity Framework \(GBF\)](#) – sets global biodiversity targets for 2030.
- [European Green Deal](#) (2019) and [Biodiversity Strategy for 2030](#) (2020).
- [Sustainable Finance Framework](#) – including the [Taxonomy Regulation](#) (2020) and [Sustainable Finance package](#) (2023).
- [Corporate Sustainability Reporting Directive \(CSRD\)](#) (2022) and [European Sustainable Reporting Standards \(ESRS\)](#) (2023)
- [Corporate Sustainability Due Diligence Directive \(CSDDD\)](#).
- [UK 2023 Green Finance Strategy](#).

Frameworks and standards

- [Taskforce on Nature-related Financial Disclosure Recommendations](#) (2023) – Strategy Target C.
- ISSB's [IFRS S1: General Requirements for Disclosure of Sustainability-related Financial Information](#) (2023).
- Commission Delegated Regulation on [Sustainability Reporting Standards](#) (2023).
- GRI's [GRI 303: Water and Effluents](#) (2018) guidance for disclosure 303-1-b, and [GRI 3: Material Topics](#) (2021).

Models, tools and guidance

- TNFD [Guidance on scenario analysis](#) (2023).
- TNFD [Discussion paper on conducting advanced scenario analysis](#) (2023).
- [ENCORE](#) – allows exploration of future scenarios in terms of potential impacts and dependencies on biodiversity.
- IPR's [Forecast Policy Scenario + Nature](#) – 'beta version' integrated nature and climate scenario for use by investors.
- Endangered Wildlife Trust [Biological Diversity Protocol](#) – a tool providing a standardised approach to account for and consolidate impacts on ecosystems and species (including scenarios).
- Netherlands Environmental Assessment Agency's (PBL) [GLOBIO Model](#) – can be used to quantify patterns and trends in biodiversity and ecosystem services under future socio-economic development scenarios.
- WWF [The Risk Filter Suite](#) – Water Risk Filter tool includes scenarios of freshwater-related risks based on the combination of climate scenarios and socio-economic scenarios (WWF plans to expand this to integrated water and biodiversity scenarios).
- SBTN [Technical Guidance of Step 1- Assess](#) – The first release of science-based targets for nature is intended for use to assist companies in preparing to set science-based targets for nature.
- [EIOPA staff paper \(2023\)](#) – Provides a framework to identify the key areas that need to be addressed in the treatment of nature-related risks and impacts in the insurance sector.
- IPBES [The Methodological Assessment Report on Scenarios and Models of Biodiversity and Ecosystem Services](#) (2016) – provides a best-practice toolkit for the use of scenarios and models in decision-making on biodiversity, human-nature relationships, and quality of life.

- CISL [Roadmap for Identification and integration of nature-related risks and impacts in underwriting and insurance brokerage](#) (2023) – charts a path for the insurance sector towards nature-positive underwriting and explores the insurance sector’s role in supporting the transition of its clients towards a sustainable economy.
- [Final Report of the NGFS-INSPIRE Study Group on Biodiversity and Financial Stability](#) (2022) – recommends the development of biodiversity-related scenario analysis and stress tests, the assessment of biodiversity and integrated climate and biodiversity scenarios.
- NGFS [Recommendations toward the development of scenarios for assessing nature-related economic and financial risks](#) (2023) – provides recommendations on the development of nature-related risk assessment scenarios, and outlines potential ways forward.
- [INSPIRE Building blocks for central banks to develop nature scenarios](#) (2023) – part of a toolbox to support central bankers and financial supervisors in calibrating monetary, prudential and other instruments in accordance with sustainability goals.
- Belmont Forum & BiodivERsA “BiodivScen” (2020) – programme supporting international research in the development of scenarios of biodiversity and ecosystem services – see the [Handbook on the use of biodiversity scenarios in support of decision-making](#).
- CDSB [Biodiversity Application Guidance](#) (2021) – assists companies in disclosure of material information about biodiversity-related risks and opportunities, designed around the first six reporting requirements of the CDSB Framework.
- ALIGN project [Recommendations for a standard on corporate biodiversity measurement and valuation](#) (2022)

ANNEX 2: HIGH-LEVEL PRINCIPLES FOR NATURE SCENARIO ANALYSIS

As part of the ICAEW and Pentland Centre collaborative project, a set of overarching principles for nature scenario analysis was identified, to guide thinking on implementation of the approach by businesses and financial institutions and to inform actions that could be undertaken to encourage uptake. Principles were developed based on a review of existing literature (eg, evolving regulatory requirements, frameworks, guidance, case studies and pilots) and feedback from roundtable participants. The principles are set out below.

1. **Recognise and tailor the scenario analysis approach** to the organisation’s unique context, size, maturity, resources, and sector. There is no one-size-fits-all method.
2. **Implement a staged approach**, starting simple and introducing increasing detail and complexity over time (perhaps in successive iterations), to make the process more manageable and accessible.
3. **Focus on where it matters most**, where nature is most material to the organisation. For example, this may be related to water scarcity, flooding or deforestation.
4. **Nature-related scenarios should ideally be as integrated as possible with climate scenarios**, while acknowledging the specific features of nature beyond climate change. For example, nature events could compound with climate events to give impacts greater than when such events happen in isolation.
5. **Avoid rushing to quantification** before nature-related dependencies, impacts, risks and opportunities are identified and understood qualitatively. The challenge of data availability should not delay the exploration of nature-related issues.
6. In setting time horizons for scenario analysis, **consider the organisation’s definition of short-, medium- and long-term timeframes**, and how those timeframes align with their strategic planning horizons and capital allocation plans.
7. **Encourage early discussions** on nature scenarios. This helps identify future data needs, facilitates proactive planning for data collection and analysis, and informs effective scenario development.

8. **Foster and encourage cross-functional collaboration** by actively involving relevant departments, including senior management, finance teams, risk management, strategy teams, sustainability, and relevant operational departments. This ensures diverse perspectives are considered, leading to more comprehensive and robust scenarios. Getting perspectives from outside the organisation can help to challenge assumptions and ensure scenarios are appropriately challenging.
9. **Foster a culture of continuous learning and improvement.** Adapt your approach to evolving knowledge, data, and scenarios over time to ensure your understanding and decision-making remain informed and relevant.
10. **Guard against reductionist thinking** (creating scenarios should challenge your thinking), **confirmation bias** (you should be surprised by what you uncover) and **focusing on elements for which you already have some solutions.**

ANNEX 3: BACKGROUND ON THE NATURE SCENARIOS PROJECT AND ICAEW'S WIDER NATURE PROGRAMME

ICAEW and the Pentland Centre for Sustainability in Business (at Lancaster University) have collaborated on a project to help build knowledge and capacity in the use of nature scenario analysis by businesses, financial institutions and the wider accounting profession, and to explore ways to accelerate uptake in the market.

Wider use of this approach will help organisations to identify, assess, manage and disclose their nature-related issues, enabling them to build business resilience and value while also contributing to global nature positive outcomes.

This briefing is one output of the project and summarises the findings from three sector roundtables (food and beverage with land management; infrastructure and built environment; and finance sector) and a cross-sector roundtable, convened by ICAEW in London in 2024. Roundtable participants included representatives from businesses and financial institutions, sector associations, consultancies and data providers.

This briefing is complemented by other project outputs, including the paper [Scenarios analysis: a Primer](#) and a business-oriented brief, [A short guide to biodiversity scenarios analysis for business](#), which provide further detail on the state of play on nature scenario analysis.

ICAEW's inputs to the project are part of a wider programme that aims to equip its members to integrate sustainability and nature into decision-making and reporting, and in doing build resilience and value for their organisations and clients, and contribute to improved outcomes for nature and people.

Other ICAEW initiatives include:

- [ICAEW Sustainability Accelerator Programme](#) – a modular e-learning course designed to equip finance professionals with the strategic insight and technical expertise required to lead sustainability initiatives (includes a module on 'Systems Thinking and Scenario Analysis for Sustainability').
- [Why nature matters to accountants: A guide to building resilience and value through nature-positive action](#) – developed by ICAEW for the Global Accounting Alliance (GAA), a coalition of 10 of the world's leading professional accountancy bodies (including ICAEW) with more than 1.4 million members worldwide. Read the ICAEW summary version [here](#).
- [Nature is Everyone's Business: The GAA's Progress and Pathway to 2030](#) – developed by ICAEW for the GAA, outlining the nature commitments made by the GAA in 2022, progress to date, and further actions that GAA members will take to accelerate collective progress.
- [A-Track \(Accelerating Transformation through Capitals Knowledge\)](#) – a four-year EU co-funded project (in which ICAEW is a consortium member) to align decision-making by businesses and governments with the transition to a nature-positive economy.

ACKNOWLEDGEMENTS

This briefing has been produced as part of a collaborative project between ICAEW and the Pentland Centre for Sustainability in Business at Lancaster University.

The authors thank all participants in the sector and cross-sector roundtables convened as part of this work for sharing their knowledge and insights.

Authors: Guy Duke (Consultant); Toby Roxburgh (ICAEW); Richard Spencer (ICAEW); Jan Bebbington (Pentland Centre); Neytullah Ciftci (Pentland Centre); and Duncan Pollard (Consultant).

Design: Sunday

Citation: ICAEW (2025) *Nature scenario analysis for resilient business and finance. Accelerating uptake: a briefing.*

© July 2025

ICAEW is a company limited by guarantee registered in England and Wales.

Published under Creative Commons license CC BY-SA 4.0. Re-users may distribute, remix, adapt, and build upon the material for any purpose (including commercial use) in any medium or format, so long as attribution is given to the GAA as its creator, any changes made are described, and ICAEW is notified of its use. If using, remixing, adapting or building upon the material, you must license the modified material under identical terms.

Disclaimer: ICAEW will not be liable for any reliance you place on the information in this publication. You should seek independent advice.

Chartered accountants are talented, ethical and committed professionals. ICAEW represents more than 210,000 members and students around the world, and 98 of the top 100 global brands employ ICAEW Chartered Accountants.*

Founded in 1880, ICAEW has a long history of serving the public interest and we continue to work with governments, regulators and business leaders globally. And, as a world-leading improvement regulator, we supervise and monitor around 11,000 firms, holding them, and all ICAEW members and students, to the highest standards of professional competency and conduct.

We promote inclusivity, diversity and fairness and we give talented professionals the skills and values they need to build resilient businesses, economies and societies, while ensuring our planet's resources are managed sustainably.

ICAEW is working towards becoming net zero, demonstrating our commitment to tackle climate change and supporting the UN Sustainable Development Goal 13.

ICAEW is a founding member of Chartered Accountants Worldwide (CAW), a global family that connects over 1.8m chartered accountants and students in more than 190 countries. Together, we support, develop and promote the role of chartered accountants as trusted business leaders, difference makers and advisers.

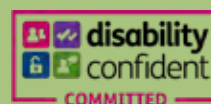
We believe that chartered accountancy can be a force for positive change. By sharing our insight, expertise and understanding we can help to create sustainable economies and a better future for all.

charteredaccountantsworldwide.com
globalaccountingalliance.com

ICAEW

Chartered Accountants' Hall
Moorgate Place
London
EC2R 6EA UK

T +44 (0)20 7920 8100
E generalenquiries@icaew.com
icaew.com



* includes parent companies. Source: ICAEW member data
March 2025, Interbrand, Best Global Brands 2024