



For professional and institutional investors
only – not to be further circulated.
In Switzerland for qualified investors only.
In Australia for wholesale clients only.

Preserving natural capital – Our approach for investments

November 2022

abrdn.com

Contents

Foreword	3
Introduction	4
Our beliefs	6
Our approach	8
1. Research and data	9
2. Investment integration	13
3. Client solutions	14
4. Active ownership	17
5. Collaboration and influence	19
6. Disclosure	20
What's next?	21
Appendix - Definitions	22

Author



Ann Meoni
Senior Sustainability Analyst –
natural capital

Who we are

We are a global investment company that helps clients and customers plan, save and invest for their future. Across markets globally, we build investment solutions to enable clients to create more opportunities for their futures.

Foreword



"We believe that understanding and managing nature-based risks and opportunities can lead to better investment decisions, and ultimately therefore potentially better outcomes for our clients. We don't see the risks linked to the loss of our planet's life support systems as something niche, sitting only in responsible investment products"

Stephen Bird
CEO abrdn

As long-term investors, we believe there are three key reasons why we should consider the preservation of natural capital:

1. Increasing financial materiality

Many sectors, especially those with a high dependency or impact on natural capital are experiencing the negative consequences from the degradation of natural capital.¹

2. Changing policy and regulation

Increasing policy and regulation such as the EU Taxonomy and the likelihood of mandatory reporting in line with the Taskforce on Nature-related Financial Disclosure (TNFD) is increasing transition risks for businesses.

3. Growing investor demand and expectation

Many clients expect key sustainability themes to be considered within investments and are asking how we are integrating the TNFD recommendations into our investment decision-making.

abrdn has made progress on embedding climate change and net-zero directed investing into our investment process, and seeks to allocate capital to support the transition to a **low carbon economy**. However, we cannot achieve a successful transition to a low carbon world without the protection and restoration of nature.

There are potential socio-economic benefits from the restoration of nature. While many economic activities both impact and rely on natural capital, it's predominately the Primary Industries (e.g. agriculture, forestry, fishing and extractives) where the highest impacts and dependencies tend to lie. However, other sectors and businesses are also exposed to these financial risks and opportunities through their supply chains and own activities.

As an investor, we can allocate capital towards solutions (businesses or services directly linked to more sustainable use of natural capital). But also to businesses that are helping preserve natural capital through strong policies, targets, and processes to reduce and prevent those impacts.

There have been regulatory and policy steps taken towards the protection of our planet's vital support systems, such as the launch of the TNFD. We support these developments and believe stronger policies are needed to reverse nature loss. We regularly review how we can most effectively work to support the evolution of TNFD. We are also looking to develop data and tools to embed the protection of nature further in our investment process.

Given the growing awareness of the importance the preservation of natural capital—both in terms of regulation and policy and to meet client expectations—it is vital we develop a clear investment approach. Our aim, as laid out in this document, is to work with the companies and real assets in which we invest to help make progress towards achieving a nature positive world.

¹ PwC: Nature is too big to fail Biodiversity: the next frontier in financial risk management, published January 2020, available online, accessed 10/12/2022

Introduction



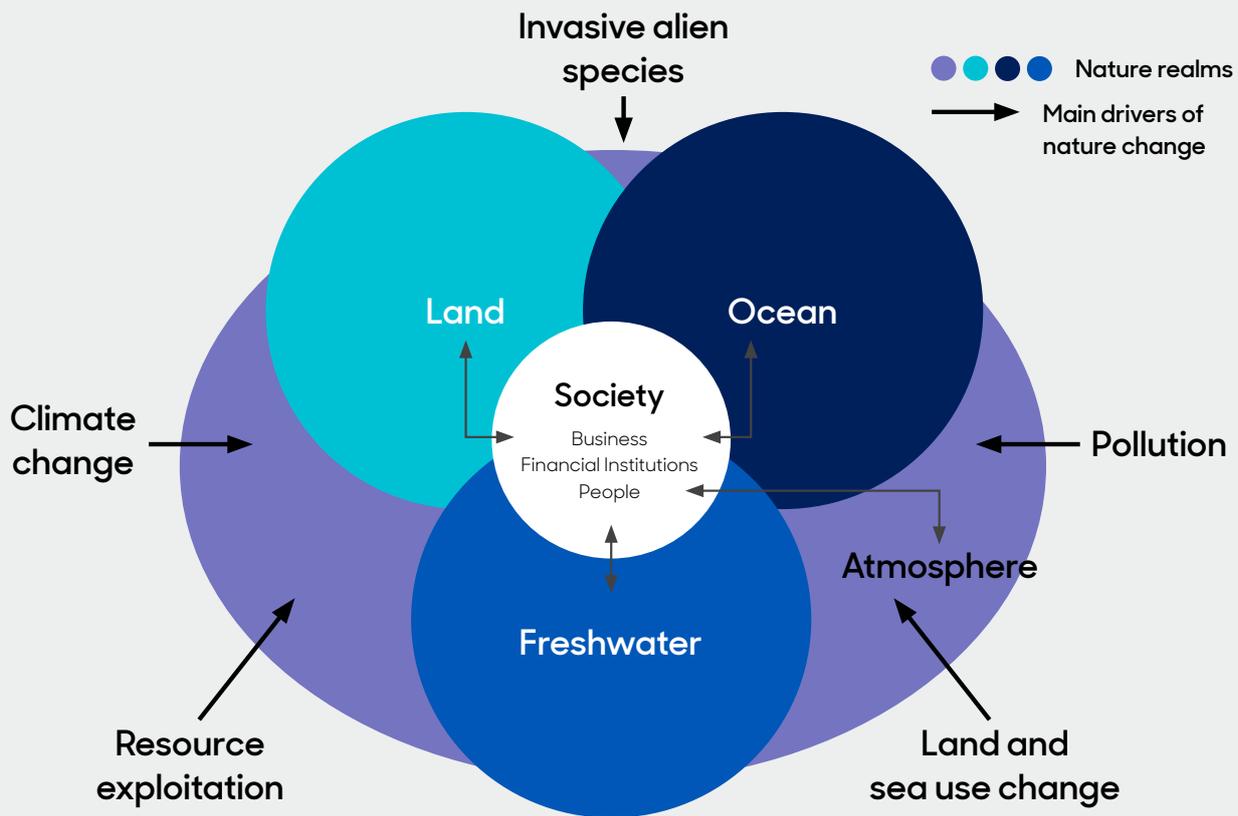
Just as financial assets generate revenue, nature consists of stocks of environmental assets that generate benefits to people and the economy. But these assets are woefully underpriced and overused. Unsustainable use of these assets leads to a loss in ecosystem service provision on which the global economy relies.

Natural capital is defined as the stocks of renewable and non-renewable resources (e.g. plants, animals, air, water, soils and minerals) that combine to yield flows and benefits to people. The nature-related terms used in this paper are defined in the appendix.

Natural capital includes ecosystem services, the benefits gained from the environment that regulate ecosystem processes and provide goods and services such as pollination, protection from extreme weather, pest control and waste disposal.

Due to the anthropogenic drivers shown in Figure 1 below, we are experiencing significant nature loss.³ A transition is required in order to halt this loss and move towards the conservation and restoration of nature. This transition will bring risks and opportunities for many of the companies and assets in which we invest. The financial sector and the asset management industry has a crucial role to play in helping to prevent further degradation of nature and support the necessary ecological transition.

Figure 1 – The four realms of nature and the 5 key drivers of nature change



Source: Adapted from – TNFD definitions of nature, [online], available at TNFD's definitions of nature » TNFD. Accessed on 22.03.2022

² Source: The TNFD Nature-related Risk & Opportunity Management and Disclosure Framework Beta v0.1 Release. [Online]. Available at: <https://tnfd.global/wp-content/uploads/2022/03/220321-TNFD-framework-beta-v0.1-FINAL.pdf> (accessed 05/12/2022).

³ IPBES – The global assessment report on Biodiversity and ecosystem services – Summary for Policy Makers. [Online]. Available at: <https://zenodo.org/record/3553579#.Y0QqMILML-g> (accessed 10/10/2022).

US\$44 trillion
– of global GDP is moderately or highly dependent on nature⁴

US\$2 to \$4.5
trillion the economic cost of biodiversity loss and ecosystem degradation in 2008⁵

69%
the reduction in wildlife populations since 1970⁶

75%
of land and 66% of the marine environment has been severely altered by human activity⁷

Ultimately, the global economy's dependence on nature is a financial risk. We described nature-related risks and opportunities in more detail in our white paper **Biodiversity loss – impossible for investors to ignore**. More intact ecosystems are more resilient.⁸ An example of this is the protection that intact environments can provide against extreme weather events, like floods and droughts.

Some examples of how we've approached natural capital can be evidenced through our engagements, position statements and investment approaches:

- **Biodiversity** – position statement
- **Environment** – position statement
- **Climate** – approach document
- **Palm oil** – position statement
- **Plastics** – position statement
- **Water** – position statement

Through our proprietary ESG House Score we assess companies, management of natural capital, such as greenhouse gas emissions, air quality, waste water, waste, supply chain and ecological impacts. However due to limited company reporting, gaps in this information exist.

Given the implications to society and our economy we continue to develop our understanding and assessment of natural capital. This document outlines our approach.



⁴ https://www3.weforum.org/docs/WEF_New_Nature_Economy_Report_2020.pdf.

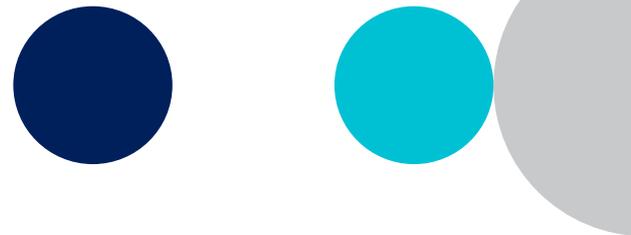
⁵ <https://www.pwc.co.uk/assets/pdf/wef-biodiversity-and-business-risk.pdf>.

⁶ WWF (2022) Living Planet Report 2022 – Building a naturepositive society. Almond, R.E.A., Grooten, M., Juffe Bignoli, D. & Petersen, T. (Eds). WWF, Gland, Switzerland. [online] accessed 10/24/2022.

⁷ IPBES (2019): Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science–Policy Platform on Biodiversity and ecosystem services. S. Díaz, J. Settele, E. S. Brondízio E.S., H. T. Ngo, M. Guèze, J. Agard, A. Arneth, P. Balvanera, K. A. Brauman, S. H. M. Butchart, K. M. A. Chan, L. A. Garibaldi, K. Ichii, J. Liu, S. M. Subramanian, G. F. Midgley, P. Miloslavich, Z. Molnár, D. Obura, A. Pfaff, S. Polasky, A. Purvis, J. Razaque, B. Reyers, R. Roy Chowdhury, Y. J. Shin, I. J. Visseren-Hamakers, K. J. Willis, and C. N. Zayas (eds.). IPBES secretariat, Bonn, Germany. 56 pages. [online] accessed 10/12/2022.

⁸ Healthy Ecosystems, Healthy Earth, Healthy People – United Nations University (unu.edu). [online]. Available at: <https://unu.edu/publications/articles/healthy-ecosystems-earth-people.html> (accessed 10/10/2022).

Our beliefs



As investors, our approach to natural capital is underpinned by four core beliefs.



01

We believe that companies and real assets that manage natural capital sustainably are more likely to see benefits to performance in the long term

The risks relating to the unsustainable use of natural capital are significant and increasingly becoming financially material for some of our investments. Especially those businesses with a high dependency and/or impact on natural capital.

For businesses managing natural capital sustainably there are opportunities in securing sustainable supply chains, new products, new markets as well as benefiting from production and cost efficiencies.

It is important that we assess the financial implications across all asset classes, including real assets, and make our portfolios more resilient to nature-related risks.



02

We believe engagement is a powerful tool to influence and support a nature positive transition

We regularly engage with companies and issuers, and integrate the sustainable use of natural capital into our thinking. This helps us better understand the issues from multiple perspectives and enables us to challenge existing practices and norms.

We recognise our responsibility to vote on resolutions for the companies in which we invest and take this seriously. We believe that using our leverage in this way is a powerful tool. Through active engagement, we can help guide companies toward best practices and participate in complex, nuanced conversations aimed at addressing the protection of natural capital.



Our beliefs in practice

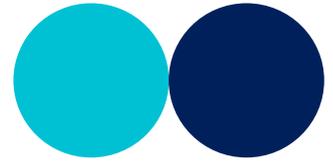
We provide insights on natural capital for investment decision-makers through research and relevant metrics.

In 2022, we published two papers on biodiversity loss. The first one introduced the current crisis, while the second one focused on why it matters to investors.



Our beliefs in practice

We can inform and influence management about natural capital risks and opportunities through engagement and voting. We clearly define how we act in our clients' interests in delivering our stewardship and ESG principles and transparently report on our actions to meet those interests.



03

We believe that stronger policies and regulation are needed to help preserve natural capital

We believe that strong policies that stimulate action and enhance transparency will enable us to make better investment decisions and potentially minimise adverse impacts from our investments. We reflect this belief in our policy-advocacy activities, both individually and collaboratively with other investors.

We support broad-based action to bring about a transformation in society's relationship with nature. We support of the vision from the Convention of Biological Diversity of living in harmony with nature by 2050.



04

We believe a nature positive future requires substantial capital allocation from the private sector

As of 2019, spending on biodiversity conservation was between \$124 and \$143 billion per year, against a total estimated biodiversity protection funding need of between \$722 and \$967 billion per year creating a large financing gap.⁹

We believe that financial innovations are needed to increase capital allocation such as the development of new asset classes and markets. These would help to provide a substantial long-term commercial opportunity for asset managers and investors to channel capital flows towards the transition to a nature positive economy.



Our beliefs in practice

We are members of the TNFD Forum and support better disclosure on material nature-related financial risks and opportunities. We are also signatories to the Business for Nature initiative, the Finance for Biodiversity pledge and the Investors' Policy Dialogue on Deforestation.

In 2022 we joined Business for Nature's call to action #MakeItMandatory asking heads of state ahead of COP15 to make it mandatory for large companies and financial institutions to assess and disclose impacts on nature by 2030.

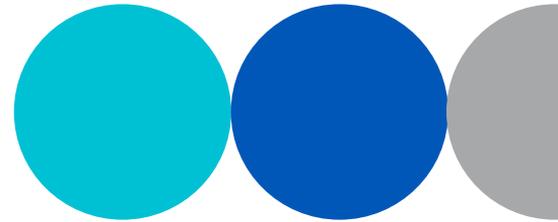


Our beliefs in practice

In 2021, on behalf of one of our strategies, abrdn invested in a Nature-based Solution project in Scotland's Cairngorms National Park. Covering more than 1,400 hectares this represents one of the largest afforestation and peatland restoration projects in the UK. Biodiversity net gain will be monitored and reported on using a leading science-based approach, conducted by a team of ecologists (more detail on page 11).

⁹ Reference: Financing Nature: Closing the Global Biodiversity Financing Gap, [online]. Available at: https://www.paulsoninstitute.org/wp-content/uploads/2020/10/FINANCING-NATURE_Full-Report_Final-with-endorsements_101420.pdf (assessed 02.23.2022).

Our approach



How we can incorporate natural capital considerations into our investment processes to help deliver nature positive outcomes:

We are building our investment approach on natural capital around six areas of focus. We show our main objectives for each area below.

Focus	Objective	Aim
Research & Data	Enhance our understanding of the implications of unsustainable use of natural capital across our asset classes and regions. Provide and source data to be able to measure this.	Provide relevant high-quality data and insights on nature-related trends, risks and opportunities that are integrated into our decision-making and seek to drive positive outcomes for our clients.
Investment Integration	Build upon and enhance the data and tools we use to enable investment decision-makers to make informed choices when considering the preservation of natural capital within their portfolios.	
Client Solutions	Understand our clients' expectations and develop investment solutions that can help deliver nature positive outcomes.	
Active ownership	Better understand how the businesses in which we are investing manage their nature-related risks and opportunities. Use our leverage to challenge investee companies' practices and encourage improvement.	
Collaboration & Influence	Collaborate with relevant industry associations and initiatives. Engage with peers and policy makers to stimulate improvements and best practice.	
Disclosure	Encourage better disclosure in line with the TNGF recommendations	

Our approach

01. Research and data

Research

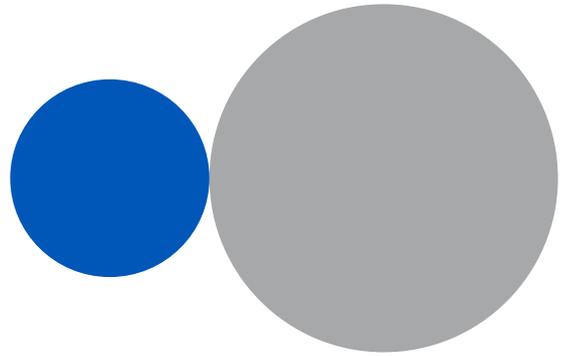
High-quality research that drives investment decisions and positive outcomes is a core component of our investment integration strategy. This research is undertaken by investment analysts and portfolio managers across asset classes. We also have a dedicated senior analyst within our Investment Vector Sustainability Group focused on the preservation of natural capital. This analyst

provides insights on key regulatory and industry trends across regions and researches specific nature-based risks and opportunities, in collaboration with the abrdn Research Institute.

The preservation of natural capital is one of our four sustainability themes (Figure 2 below).

Figure 2 – Preserving natural capital represents one of our four Sustainability themes





Recently we have published a number of research papers related to natural capital:



📄 Biodiversity Loss - introducing the next environmental crisis

What is the scale of global biodiversity loss, and what are the drivers? What is happening in the policy landscape to enable a transition to a nature positive world?

📄 Biodiversity loss - impossible for investors to ignore

All businesses rely on nature, but human activity is destroying the very resources on which we depend. This creates risks for investors, but where companies are adopting more sustainable business models opportunities may exit too.

📄 Nature as a climate solution

Nature-based solutions (NbS) are the active protection, management and restoration of natural ecosystems that help to solve societal challenges whilst simultaneously providing improved biodiversity and positive social value.

Interlinked with our approach on natural capital is our **📄 approach and research on climate change.**

Data

Natural resources and the drivers of impacts on them are, by necessity, measured in different ways. The material impacts and dependencies that businesses have on natural capital are also location dependent. For example, using 1m³ of water in Egypt has a very different impact than using the same volume in Scotland.

Company and listed assets

Currently disclosure on metrics related to impact and dependencies on natural capital is lacking at company level, and frameworks detailing expectations regarding company level disclosure are in development. The TNFD has outlined a dashboard of metric categories for assessing business' impacts and dependencies on nature (see table 1). Currently company level reporting on these metrics is poor, with only Greenhouse Gas (GHG) emissions reporting standardized and relatively comparable.

Given the existing reporting gap, asset managers are currently dependent on proxy data based on sectors or on products. This data provides a starting point for understanding potential impacts and dependencies our holdings have on nature, but it does not provide us with information on the actual holdings' impacts or dependencies. Therefore, while complex, we support businesses reporting in alignment to the TNFD's recommendations and hope to see improved disclosure over time, reducing the reliance on proxy data.



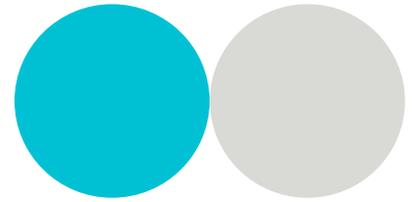
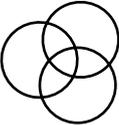


Table 1: TNFD assessment metrics categories and indicators of company disclosure

Metric categories	Sub - category 1	Sub - category 2	Indicator - Illustrative example
Impact drivers 	Land/water/sea use change	Terrestrial ecosystem use	● Extent of land converted
		sea use change	● Extent of freshwater area converted
		Marine ecosystem use	● Extent of marine area converted
	Resource use	Water use/replenishment	● Volume of water consumption
		Other resource use/ replenishment	● Use of natural resources (e.g. wild fish stocks)
	Climate change	GHG's/carbon storage, sequestration & removal	● Scope 1,2 and 3 emissions
	Pollution	Non-GHG air pollutants	● Volume of non-GHG air pollutants released
		Soil pollutants	● M3 of soil pollutants released
		Water pollutants	● M3 of water discharged
		Solid waste	● Tonnes of hazardous & non-hazardous waste
	Invasive species & other	Biological alterations	● Level of invasive species in area
		Disturbances	● Level of noise pollution
	State of nature 	Ecosystems	Extent
Condition - minimum of compositional state			● Species richness
Species (if material)		Population	● Species abundance
		Extinction risk	● Species threat abatement
Ecosystem services 	Provisioning	Biomass provisioning, including genetic material	● Weight of biomass
		Water supply (including drinking water)	● Volume of water withdrawn
	Regulation	Water purification &/or water flow regulation/ maintenance	● Amount of water flow regulated
		Soil quality regulation, soil and sediment retention or solid waste remediation	● Tonnes of soil retained
		Pollination, pest/disease control, nursery population or habitat maintenance	● Area of habitat providing services
		Flood or storm mitigation, noise attenuation other regulating services	● Number of properties in low risk categories
		Global or local climate regulation, rainfall pattern regulation, air filtration	● Tonnes of GHG retained
	Cultural	Recreation, visual amenity, scientific and education or spiritual/artistic/symbolic	● Number of visits for cultural purposes

● Good ● Moderate in some regions ● Poor



In 2022 we reviewed our existing access to data in comparison to the assessment metrics outlined by the TNFD. This review highlighted a need to supplement our existing data from both our third-party providers and our own inhouse research. In 2022 we initiated a review of the available data and solutions available from third party data providers to better integrate them into our in-house investment tools, similar to our approach for climate-related data.

We currently have the ability to use data from ENCORE¹⁰ to understand the potential material impacts of our fixed income and equities holdings on nature. This work will help to shape our engagements and research focus.

While we don't have all the data right now, we do know which sectors have the largest negative impact on natural capital and the highest dependencies. These are the Primary Industries and businesses linked to agricultural products and minerals through the supply chain.

Real Assets

For real assets we need to understand the interface of those assets with nature. For example our real estate approach measures performance across 21 Environmental, Social, and Governance ("ESG") indicators, many of which refer to topics related to nature through ecosystem services or biodiversity. This helps us to understand both risks and opportunities.

Figure 3 – abrdn real estate approach to sustainability



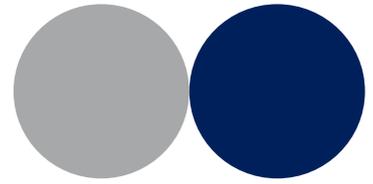
● Indicators related to natural capital ● Other sustainability indicators not linked to natural capital

Many indicators refer to topics related to nature via ecosystem services or biodiversity

¹⁰ ENCORE was developed by the natural capital Finance Alliance in partnership with UNEP-WCMC and was financed by the Swiss State Secretariat for Economic Affairs (SECO) and the MAVA Foundation. Source: <https://encore.naturalcapital.finance/en/about>.

Our approach

02. Investment integration



We assess risks and opportunities in relation to many ESG factors as part of our investment process. This includes understanding the risks and opportunities related to natural capital.

The first step is to clearly identify the nature-related risks and opportunities that a country, sector, company or real asset is facing and assess their financial materiality. The TNFD framework provides a useful guide for this (see figure 4).

Figure 4 - Natural capital's financial materiality



Source: abrdn in alignment with the TNFD's beta framework published March 2022.

Transition risks and opportunities arise from changing strategies, policies or investments necessary to transition to a nature positive world.

Physical risks are driven by the degradation of biodiversity (for example where overexploitation has reduced stocks), while the physical **opportunities** come from the enhancement of ecosystem services (for example higher longer-term yields through improvements to soil biodiversity).

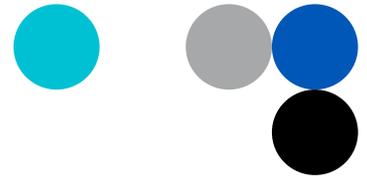
Systemic risks are those arising from the breakdown of the entire system, rather than the failure of individual parts.

The exposure to natural capital related risks and opportunities can be assessed using third party data sources, our own proprietary ESG House Score, and research notes from the Investments Sustainability Group, the abrdn Research institute and the investment teams.

Our natural capital working group brings together teams from throughout the business to help develop better integration of natural capital into the investment decision making process.

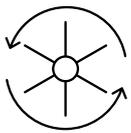
Our approach

03. Client Solutions



Beyond our standard sustainability considerations, abrdn currently offers products with explicit criteria linked to natural capital in equity, fixed income and real assets.

These products fall into four categories:



Sustainable funds – our sustainable funds invest in companies which show superior management of ESG factors. Within our sustainable funds, we avoid certain industries that may be deemed as unsustainable.



Impact investing – Our impact funds invest in companies that provide solutions, products or services that counter environmental and/or social challenges. We align some of our impact funds to recognised standards such as the UN Sustainable Development Goals.



Thematic funds – We design our thematic funds to help investors benefit from specific responsible investing themes such as climate change and low-carbon technologies.

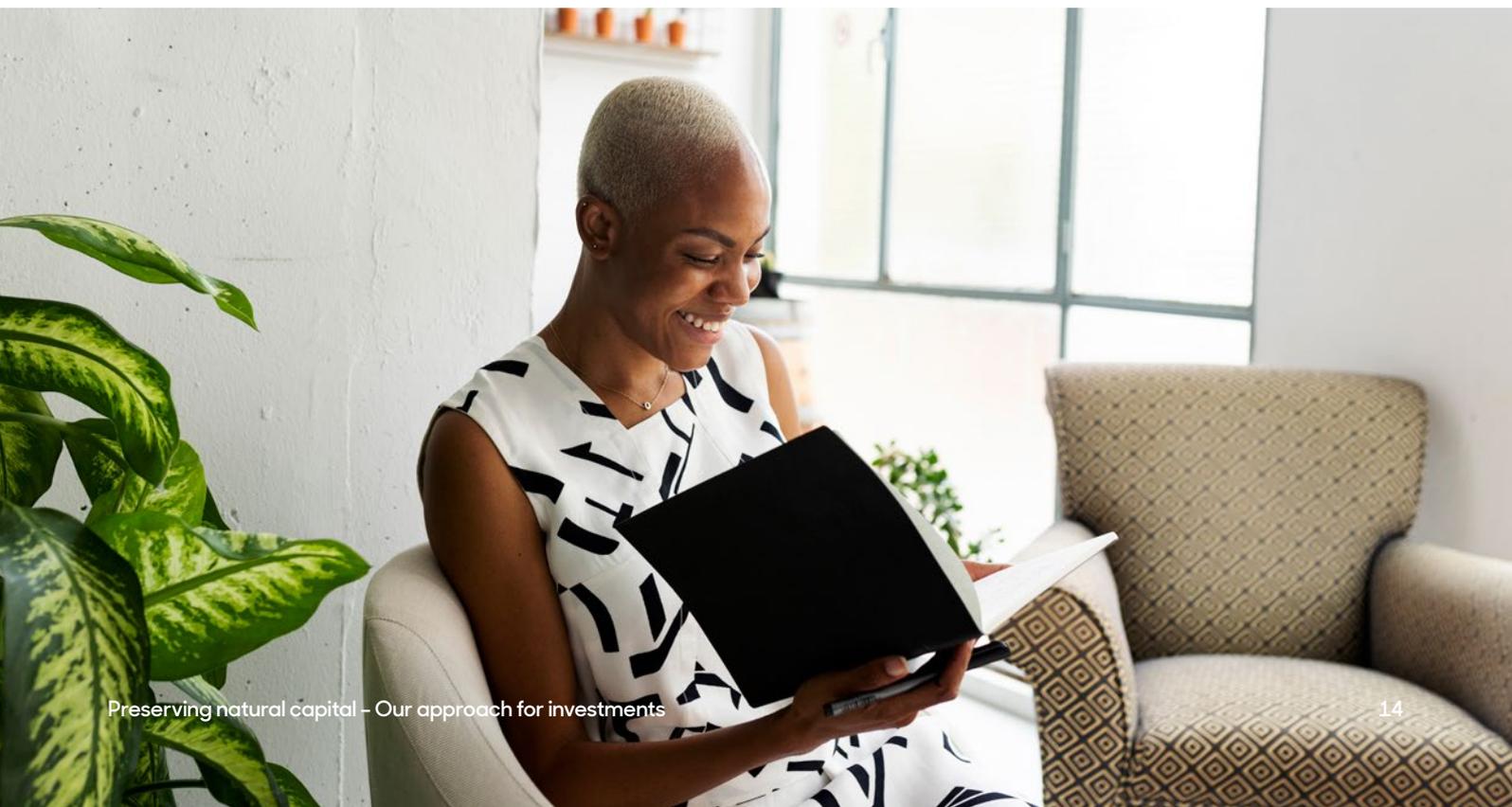


Values-driven funds – such as ethical strategies, that screen securities on criteria linked to the preservation of natural capital.

Deep dive - impact investing

Our impact-investing solutions aim to support the delivery of measurable, positive environmental and social impacts while also seeking to generate strong financial returns. Our approach is based on identifying positive impacts and allocating capital aligned with the UN Sustainable Development Goals (SDGs).

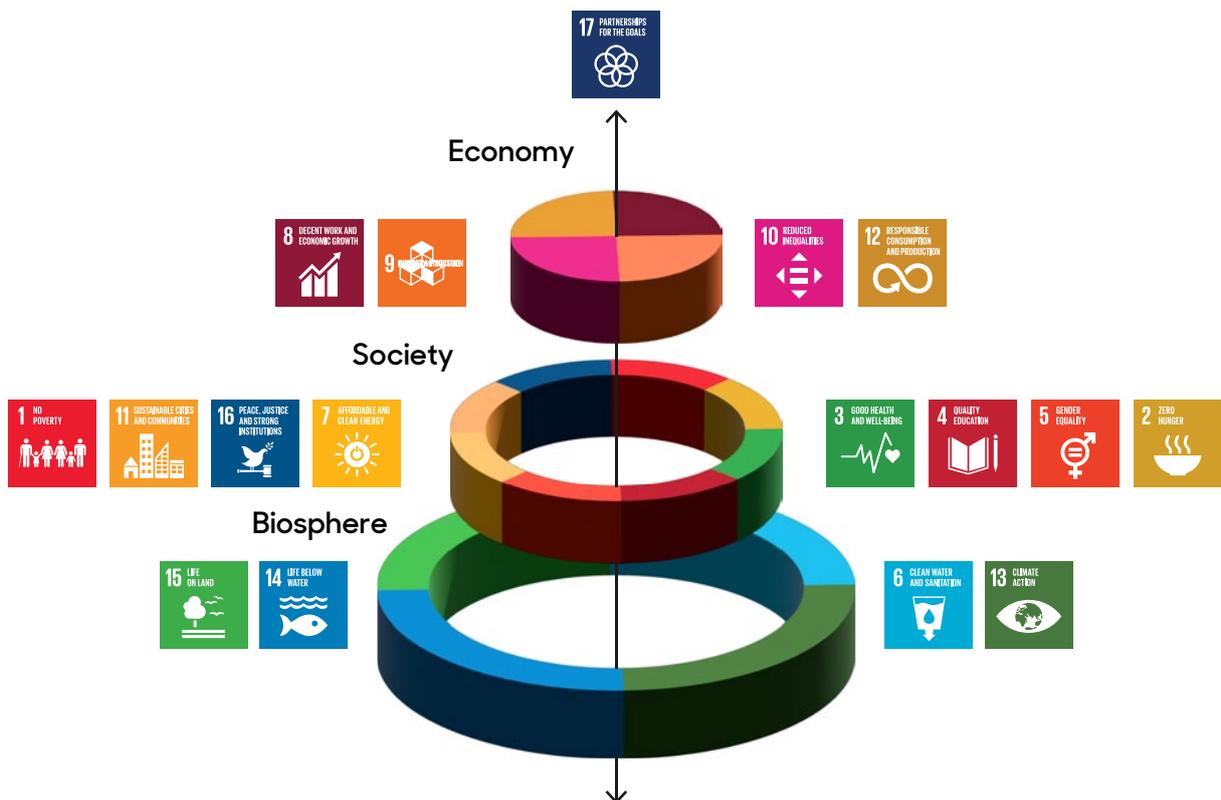
This currently includes a global equity strategy that looks for investment opportunities across all of the SDGs (e.g. clean water and sanitation, protect the planet, life below water and life on land). We recognise that achieving the Sustainable Development Goals will depend upon a healthy biosphere.



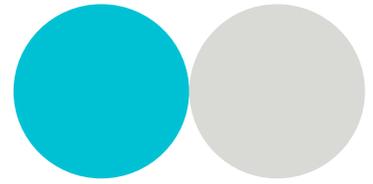
abrdn's impact investing framework

SUSTAINABLE DEVELOPMENT GOALS	Pillars	Sub-themes
 	Circular Economy	Resource efficiency Material recovery and reuse
 	Sustainable Energy	Access to energy Clean energy Energy efficiency
   	Food & Agriculture	Access to nutrition Food quality Sustainable agriculture
  	Water & Sanitation	Access to water & hygiene Clean water Water efficiency
  	Health & Social Care	Access to healthcare & social care Enhanced healthcare Drug development
  	Financial Inclusion	Access to financial services
  	Sustainable Real Estate & Infrastructure	Affordable housing Eco-construction Improved access
   	Education & Employment	Access to education and skills development Quality employment and job creation

Source abrdn, April 2021.



Source: Azote Images for Stockholm Resilience Centre, Stockholm University.



Real assets

Within our real asset investments, and specifically for real estate, we not only look at how property developers are mitigating the impact of the development on the local environment, but beyond that to potentially affect positive environmental improvements. Our approach is based on two phases in the asset's lifecycle:

1. **The construction phase** - for construction/development sites, there are two ways to consider our impact on nature. The first is to focus directly on the existing site and optimise for nature as much as possible around the building and target biodiversity net gain. The second is to actively engage with the supply chains of the materials used to construct the buildings to reduce the impact on nature upstream.

2. **The use phase** - For buildings already standing, where we have management control and can be directly involved on site, we can optimise the site for nature as much as possible (e.g. native species planting alongside installation of bird and bat boxes). Where our occupiers have control, we can engage and work together to improve the building's environmental surroundings.

We have also set out our approach to  **nature-based solutions**, and invest in these solutions.

Investing in nature-based solutions

On behalf of one of our abrdn strategies, our natural capital team has acquired a substantial nature-based project situated in the Cairngorms National Park. The land extends to an area of over 1,400 ha and will represent one of the largest afforestation and peatland restoration projects in the UK.

- The aim is to restore more than 900 ha of and to restore over 150 ha of degraded peatland.
- It's estimated the project will deliver up to 195,000 tonnes of claimable carbon to 2060 at a cost of £22 per tonne on a discounted cash flow basis. The fund will have valuable flexibility to hold the asset beyond 2060, with further carbon offsetting benefits if required.
- Biodiversity net gain will be monitored and independently reported to investors over time. This will be done using a leading science-based approach, carried out by a team of ecologists.
- Focusing on native broad-leaved trees and Scots pine, the woodland creation element of the project will improve amenity, enhance biodiversity, mitigate flooding and improve air quality, while restoring the drained peatlands. The wider environmental net gain will also be measured.
- Local contractors and forestry consultants will, where possible, be employed to deliver the project. Benefits for the local community will be promoted where possible, such as bird-watching huts and the restoration of bothies for hillwalkers.
- On areas of open and unplanted land, nature will be left where possible to recover in a natural way, with minimal intervention management practices to promote further biodiversity net-gain benefits.

Cash flows and project risks were reviewed in detail during an in-depth pre-acquisition due-diligence exercise.

Peatland surveys and breeding-bird surveys were carried out prior to completion of the purchase to assess risks and the impact on the potential planting plan and the carbon it could generate. Outputs are modelled using the UK government's Woodland Carbon Code methodology and calculator. Expert advice is provided by leading ecologists and forestry consultants.

Far Ralia Estate represents one of the largest native woodland and degraded peatland restoration projects in the UK. It signifies to our clients that abrdn is committed to taking tangible action to provide innovative solutions on the pathway to net zero, while helping to address biodiversity decline. It's crucial to note that investing in nature-based solutions plays an important role in achieving net zero but this has to be alongside emissions reduction targets.



Our approach

04. Active ownership

Company and listed assets

We believe that corporate engagement is essential to outline our expectations and support the preservation of natural capital. We expect our holdings to have appropriate policies, risk-management systems and clear strategies and targets regarding environmental impacts, and manage dependencies on natural capital. While currently we can encourage diligence, we know better data will help us start setting clear milestones with investee companies.

We view regular engagement with companies and bond issuers (government and corporate) as essential to understanding the management of nature-related risks and opportunities. This engagement allows us to both gain insights and communicate our expectations to stakeholders.

Specifically, we expect investee companies to:

- Understand the material risks and opportunities related to the preservation of natural capital, and assess the potential financial impact along the company value chain.
- Integrate these risks and opportunities into longer-term business planning.
- Develop metrics to better measure and manage potential impacts and dependencies on nature.
- Invest in specific plans and measures to manage these issues.
- Disclose material impacts and dependencies on nature in line with the TNFD recommendations.

We believe that companies with potentially high impacts and dependencies on nature need to take these requirements seriously. As large investors, our active engagement and capital-allocation decisions provide a strong incentive for our investee companies to re-channel their own investments from nature-negative to nature-positive activities, assets and technologies.

Through active engagement we can help guide companies towards best practices on environmental issues. Where our corporates are unwilling to engage or where we see insufficient progress, we may look for ways to increase our leverage, e.g. by joining collaborative industry groups.

In our equity investments, we also exercise our influence through our voting activities. While there has been a rise in the number of shareholder resolutions on environmental issues at annual or extraordinary general meetings, these have been mainly focused on climate. We believe that using voting rights in this way is a powerful tool.



Voting case studies:

Tyson Foods Inc.

In 2021 we supported a resolution calling on Tyson Foods Inc. to report on the deforestation impacts in its supply chain. Our rationale was that Tyson was lagging behind peers in terms of its disclosure of supply chain impacts on deforestation. Tyson is highly exposed to commodities that drive global deforestation, particularly beef.

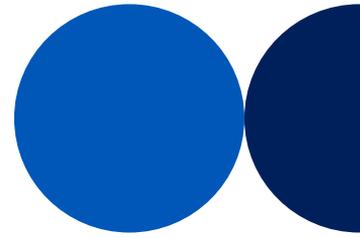
The Kroger Co.

In 2021 we supported a resolution for The Kroger Co. to assess the environmental impact of non-recyclable packaging. Our rationale behind supporting the vote was that the company had not set quantitative or time-bound targets for reducing its overall use of plastic. In addition to increased regulatory oversight and potential costs related to plastic packaging, there may be increased reputational risk from not having a more comprehensive corporate strategy for reducing plastics use. Further, Kroger is already tracking its packaging footprint, thus the requested disclosures would not place significant burden on the company.

Archer-Daniels-Midland (ADM)

In 2022 we supported a proposal asking for ADM to report on pesticide use in the company's supply chain. Our rationale in supporting this proposal was based on a belief that it was in shareholder's interests to better understand how the company was managing this given the growing understanding of risks linked to the use of pesticides both in terms of human health and biodiversity loss.

Discussion of individual securities above is for informational purposes only and not meant as a buy or sell recommendation nor as an indication of any holdings in our products.



We have laid out our expectations for key sectors impacting on biodiversity loss in our white paper [\[link\]](#) 'Biodiversity loss – impossible for investors to ignore'. We also provided a table of more general engagement questions for all sectors (see table 2 below).

Table 2 – General engagement framework on biodiversity – all sectors

	Indicators	Questions companies	Best Practice
General engagement questions relevant to all companies (TCFD aligned as TNFD framework not yet released)			
Governance	Governance around biodiversity-related risks and opportunities	<ul style="list-style-type: none"> • Does the board or executive have oversight of biodiversity-related risks? • To what extent is biodiversity integrated into core decision-making or risk-management frameworks? 	<ul style="list-style-type: none"> • Biodiversity is recognised at board or management level as a key environmental challenge and market driver • Biodiversity is an integral part of the executive decision-making framework
Strategy	The actual and potential impacts of biodiversity-related risks and opportunities on the company's strategy	<ul style="list-style-type: none"> • How does biodiversity loss represent a risk to your company, strategy, or operations over the short, medium, and long term? • How do you manage negative impacts on biodiversity resulting from your activity? • Do you operate in, or any of your key core materials originate from biodiversity hotspots? • Are there any biodiversity-related opportunities for the business, if so are you positioned to capture these? 	<ul style="list-style-type: none"> • The company understands the nature-related financial risks and opportunities for its business • The company goes beyond adherence to regulations and has developed or is developing its own biodiversity approach policy • The company conducts impact assessments to assess the value of its sourcing or production regions and can demonstrate governance policies to protect biodiversity hotspots • The company explores biodiversity-related opportunities in a way that supports sustainability
Risk Management	The processes used by the company to identify, assess and manage biodiversity-related risks	<ul style="list-style-type: none"> • How do you identify, assess, and manage biodiversity-related risks? • To what extent do you engage with biodiversity initiatives, such as the TNFD, NCFA, EU Business@Biodiversity Platform, or Finance for Biodiversity Pledge? • How do you assess the exposure of your supply chain to biodiversity risk? • Do you ensure compliance with conservation best practice across the supply chain? 	<ul style="list-style-type: none"> • The company recognises the importance of biodiversity in the broader risk framework and has conducted, or is conducting, a review of its significance relative to their own activities • The company recognises the need for collaboration on developing a unified industry approach to biodiversity. It may not be involved in specific initiatives, but should be aware of their existence and evidence of exploring engagement is valued • Company has a certified environmental management system (such as ISO 14001) that extends to its supply chain
Metrics & Targets	The metrics and targets used to assess and manage biodiversity related risks and opportunities	<ul style="list-style-type: none"> • What targets have you set in relation to biodiversity? • Do you measure your impact on biodiversity? If so, how, and do you disclose this? 	<ul style="list-style-type: none"> • The company sets, or intends to set, targets on biodiversity, such as no net loss or net gain of biodiversity by 2030 • Given the measurement challenge, the company may not actively measure biodiversity, but best practice would be a willingness to do so and evidence that they have explored measuring and reporting

Our approach

05. Collaboration and Influence

Collaboration can enable more effective action, and given that nature is deteriorating faster than at any time in human history we need to work together to alter this trend. We are strong advocates for the power of collective engagements to signal and help bring about change.

We look to collaborate and share knowledge on the assessment of methodologies, nature-related metrics, and financing approaches for a transition to a nature-positive world. To encourage collaboration we work with industry associations, NGOs and with other relevant initiatives. We also aim to encourage action through policy advocacy.

Industry Associations and Initiatives

abrdrn participates in the following initiatives and associations.

Taskforce on Nature-related Financial Disclosures (TNFD) Forum members – The TNFD Forum is a global multi-disciplinary consultative group of institutions with over 650 members. As part of the Forum, we provide support and contribute to the TNFD vision and mission.

Principles for Responsible Investment (PRI) – The PRI works to understand the investment implications of environmental, social and governance (ESG) factors and support signatories (such as abrdrn) in incorporating these factors into investment and ownership decisions.

FAIRR (Farm Animal Investment Risk and Return) – We are a proud Member of the FAIRR Initiative’s investor network, helping to build a more sustainable food system by raising awareness of the material risks and opportunities present in global protein supply chains.

Valuing Water Finance Initiative (VWFI) – Is a global investor-led effort to engage 72 companies with high-water footprints to value and act on water as a financial risk and drive the necessary large-scale change to better protect water systems.

Finance for biodiversity pledge – pledge signatories call on global leaders and commit to protecting and restoring biodiversity and agree to:

- Collaborate and share knowledge
- Engage with companies
- Assess impact
- Set targets
- Report publicly on the above before 2025

Policy advocacy

To accelerate the transition through capital-allocation opportunities investors are reliant on the development of government policies to remove barriers and provide incentives.

Stronger policies would result in additional costs for certain sectors, but also create significant opportunities. We can help by advocating for clear policy frameworks for nations and businesses alike to halt and reverse biodiversity loss.

Business for Nature – In 2022 abrdrn joined the Business for Nature’s call to action, joining over 1,000 business from around the world who are calling for ambitious and collective action for nature. In October 2022 we also signed Business for Nature’s #MakeItMandatory statement. Calling on heads of state to ‘Make It Mandatory’ to assess and disclose impacts and deficiencies on nature by 2030.

Investors Policy Dialogue on Deforestation (IPDD) – The IPDD seeks to ensure long-term financial sustainability of investments in the countries they are invested in by promoting sustainable land use and forest management and respect for human rights, with an initial focus on tropical forests and natural vegetation.



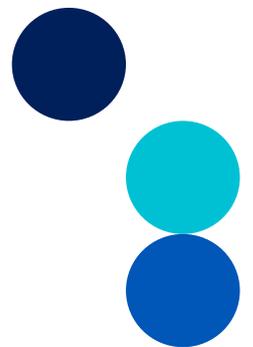
Our approach

06. Disclosure

The TNFD is developing a clear framework for disclosure on nature-related financial risks. The launch of the beta framework in March 2022 was a major step forward. We hope that TNFD follows the same path as TCFD and leads to increased nature-related data transparency, thus helping to make the financial system more resilient to nature-related risks. We encourage better disclosures from organisations, in line with the framework. Ideally, the information on climate and nature should be verifiable and aligned.

We have clear and sector-specific expectations on the disclosures and management businesses should be providing in relation to the preservation of natural capital. These expectations are aligned to the EU Taxonomy's do no significant harm principle.

We are also working to improve our own disclosures. In particular, we publish case studies on our engagement activities, as well as our voting policies and voting track record - this includes how we voted on every resolution for every company. These are available on our website.

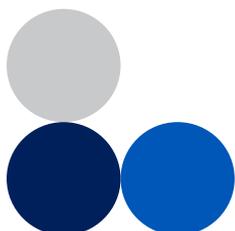


What's next?

We are working to move things forward across all six of our focus areas. Below we set out our current nature-related priorities:

Focus	Activity
Research & Data	<ul style="list-style-type: none">• Continue in-depth research to highlight the financial implications for our investments and identify best practices. Initially we will be focusing on forest risk commodities, water, and packaging. This research will help us to make more informed investment decisions and use our influence in meaningful ways.• Review available data sources to enable comparable reviews on how effectively businesses are managing nature-based risks and opportunities in line with initial TNFD recommendations.
Investment Integration	<ul style="list-style-type: none">• Cross-team group where research, insights and concerns can be shared and discussed.• Developing a clear natural capital framework to identify high-risk sectors and use this to inform engagement planning.• Evolving our tool kit to incorporate metrics as they improve with a specific focus on biodiversity loss.
Client Solutions	<ul style="list-style-type: none">• Develop new products and solutions to meet growing client demand for nature-focused investments.
Active ownership	<ul style="list-style-type: none">• Continue to engage with companies and issuers specifically on issues around land-use change and water. These issues are most material for the agricultural, food and beverages sectors (utilising data from Global Canopy's Forest 500 and aligned to the work of Valuing Water in Finance Initiative).• Continue to reflect our views on the preservation of natural capital through voting and shareholder resolutions.
Collaboration & Influence	<ul style="list-style-type: none">• Support the aims of both the Business for Nature initiative and the run up to COP15.• Collaborate on pilots of the TNFD framework.• Support the aims of the Valuing Water in Finance Initiative, including engagement activity.• Support the aims of the Finance for Biodiversity pledge.• In the run up to COP27 and COP15 we aim to have ongoing collaboration with industry associations and environmental organisations.
Disclosure	<ul style="list-style-type: none">• Support the work of the TNFD and improve our own reporting to better align with the framework.

This document will be updated regularly to demonstrate the progress and decisions we are making in relation to natural capital.



Appendix – Definitions



These definitions, unless referenced, have been taken from the TNFD Nature-related Risk & Opportunity Management and Disclosure Framework Beta v0.1 Release.

Nature – TNFD defines nature as a construct of four realms – Land, Ocean, Freshwater and Atmosphere (as shown in Figure 1).

Natural capital – Defined as natural resources that combine to yield a flow of benefits to people. Just as assets in investments give rise to flows of revenue, nature consists of stocks of environmental assets that give rise to associated flows of benefits to people and the economy. Examples of natural capital are minerals (including fossil fuels); water; waste assimilation; carbon dioxide absorption; arable land; and erosion control.

Primary Industries – The section of industry that provides raw materials to be made into goods, for example farming and mining.¹¹

Nature positive – A high-level goal and concept describing a future state of nature (e.g., biodiversity, ecosystem services and natural capital) which is greater than the current state.

Environmental Assets – The naturally occurring living and non-living components of the Earth, together constituting the biophysical environment, which may provide benefits to humanity.¹²

Ecosystems – Defined by TNFD as a dynamic complex of plants, animals and microorganisms, interacting with each other and their non-living environment. They are an important asset of natural capital and support the provision of ecosystem services.

ecosystems services – Ecosystem services deliver benefits (the goods and services that are ultimately used by people and society) to business. Examples of this include water purification, crop pollination, protection from floods and storms as well as carbon sequestration. Not only do they benefit our well-being but our economic outputs are highly dependent on them.

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.

More intact ecosystems are more resilient to shocks such as extreme weather events like floods and droughts.

¹¹ Oxford Advanced Learner's Dictionary online.

¹² UN (2021) System of Environmental-Economic Accounting – Ecosystem Accounting.



Important Information

For professional and institutional investors only – not to be further circulated. In Switzerland for qualified investors only. In Australia for wholesale clients only.

Any data contained herein which is attributed to a third party ("Third Party Data") is the property of (a) third party supplier(s) (the "Owner") and is licensed for use by abrdrn**. Third Party Data may not be copied or distributed. Third Party Data is provided "as is" and is not warranted to be accurate, complete or timely. To the extent permitted by applicable law, none of the Owner, abrdrn** or any other third party (including any third party involved in providing and/or compiling Third Party Data) shall have any liability for Third Party Data or for any use made of Third Party Data. Neither the Owner nor any other third party sponsors, endorses or promotes any fund or product to which Third Party Data relates.

**abrdrn means the relevant member of abrdrn group, being abrdrn plc together with its subsidiaries, subsidiary undertakings and associated companies (whether direct or indirect) from time to time.

The information contained herein is intended to be of general interest only and does not constitute legal or tax advice. abrdrn does not warrant the accuracy, adequacy or completeness of the information and materials contained in this document and expressly disclaims liability for errors or omissions in such information and materials. abrdrn reserves the right to make changes and corrections to its opinions expressed in this document at any time, without notice.

Some of the information in this document may contain projections or other forward-looking statements regarding future events or future financial performance of countries, markets or companies. These statements are only predictions and actual events or results may differ materially. The reader must make his/her own assessment of the relevance, accuracy and adequacy of the information contained in this document, and make such independent investigations as he/she may consider necessary or appropriate for the purpose of such assessment.

Any opinion or estimate contained in this document is made on a general basis and is not to be relied on by the reader as advice. Neither abrdrn nor any of its agents have given any consideration to nor have they made any investigation of the investment objectives, financial situation or particular need of the reader, any specific person or group of persons. Accordingly, no warranty whatsoever is given and no liability whatsoever is accepted for any loss arising whether directly or indirectly as a result of the reader, any person or group of persons acting on any information, opinion or estimate contained in this document.

This communication constitutes marketing, and is available in the following countries/regions and issued by the respective abrdrn group members detailed below. abrdrn group comprises abrdrn plc and its subsidiaries:
(entities as at 3 October 2022)

United Kingdom (UK)

abrdrn Investment Management Limited registered in Scotland (SC123321) at 1 George Street, Edinburgh EH2 2LL. Authorised and regulated in the UK by the Financial Conduct Authority.

Europe¹, Middle East and Africa

¹ In EU/EEA for Professional Investors, in Switzerland for Qualified Investors – not authorised for distribution to retail investors in these regions:

Belgium, Cyprus, Denmark, Finland, France, Gibraltar, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, and Sweden: Produced by abrdrn Investment Management Limited which is registered in Scotland (SC123321) at 1 George Street, Edinburgh EH2 2LL and authorised and regulated by the Financial Conduct Authority in the UK. Unless otherwise indicated, this content refers only to the market views, analysis and investment capabilities of the foregoing entity as at the date of publication. Issued by abrdrn Investments Ireland Limited. Registered in Republic of Ireland (Company No.621721) at 2-4 Merrion Row, Dublin D02 WP23. Regulated by the Central Bank of Ireland. **Austria, Germany:** abrdrn Investment Management Limited registered in Scotland (SC123321) at 1 George Street, Edinburgh EH2 2LL. Authorised and regulated by the Financial Conduct Authority in the UK. **Switzerland:** abrdrn Investments Switzerland AG. Registered in Switzerland (CHE-114.943.983) at Schweizergasse 14, 8001 Zürich. **Abu Dhabi Global Market ("ADGM"):** Aberdeen Asset Middle East Limited, 6th floor, Al Khatem Tower, Abu Dhabi Global Market Square, Al Maryah Island, P.O. Box 764605, Abu Dhabi, United Arab Emirates. Regulated by the ADGM Financial Services Regulatory Authority. For Professional Clients and Market Counterparties only. **South Africa:** Aberdeen Asset Managers Limited ("AAML"). Registered in Scotland (SC108419) at 10 Queen's Terrace, Aberdeen, AB10 1XL AAML is not a registered Financial Service Provider and is exempt from the Financial Advisory And Intermediary Services Act, 2002. AAML operates in South Africa under an exemption granted by the Financial Sector Conduct Authority (FSCA FAIS Notice 3 of 2022) and can render financial services to the classes of clients specified therein.

Asia-Pacific

Australia and New Zealand: abrdn Australia Limited ABN 59 002 123 364, AFSL No. 240263. In New Zealand to wholesale investors only as defined in the Financial Markets Conduct Act 2013 (New Zealand). **Hong Kong:** abrdn Hong Kong Limited. This document has not been reviewed by the Securities and Futures Commission. **Malaysia:** abrdn Malaysia Sdn Bhd, Company Number: 200501013266 (690313-D). This document has not been reviewed by the Securities Commission of Malaysia. **Thailand:** Aberdeen Asset Management (Thailand) Limited. **Singapore:** abrdn Asia Limited, Registration Number 199105448E.

Americas

Brazil: abrdn Brasil Investimentos Ltda. is an entity duly registered with the Comissão de Valores Mobiliários (CVM) as an investment manager. **Canada:** abrdn is the registered marketing name in Canada for the following entities: abrdn Canada Limited, abrdn Investments Luxembourg S.A., abrdn Private Equity (Europe) Limited, abrdn Capital Partners LLP, abrdn Investment Management Limited, Aberdeen Standard Alternative Funds Limited, and Aberdeen Capital Management LLC. abrdn Canada Limited is registered as a Portfolio Manager and Exempt Market Dealer in all provinces and territories of Canada as well as an Investment Fund Manager in the provinces of Ontario, Quebec, and Newfoundland and Labrador. **United States:** abrdn is the marketing name for the following affiliated, registered investment advisers: abrdn Inc., Aberdeen Asset Managers Ltd., abrdn Australia Limited, abrdn Asia Limited, Aberdeen Capital Management LLC, abrdn ETFs Advisors LLC and Aberdeen Standard Alternative Funds Limited.

For more information visit abrdn.com

GB-131022-182120-1

abrdn.com

STA1022079360-001