

AN INTRODUCTION TO RESPONSIBLE INVESTMENT: CLIMATE ADAPTATION AND RESILIENCE

OVERVIEW

- This guide introduces climate adaptation and resilience and explains their relevance to investors.
- The guide begins by defining climate adaptation and resilience and explaining why they matter to investors. Recent government action on adaptation and resilience is highlighted.
- The second part of the guide explores appropriate responses for investors, including:
 - integration of climate adaptation and resilience considerations into the investment process
 - stewardship with investees in different asset classes
 - disclosure of policies and practices related to climate adaptation and resilience
- Selected further reading is provided throughout the document. For more information on topics raised in this guide, please [get in touch](#).

AN INTRODUCTION TO
**RESPONSIBLE
INVESTMENT**

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THE RELEVANCE OF CLIMATE ADAPTATION AND RESILIENCE

WHAT ARE CLIMATE ADAPTATION AND RESILIENCE?

In 2024, average global warming reached 1.55°C above the pre-industrial average, marking the hottest year in global temperature data going back to 1850 and likely in the last 100,000 years.¹ The year was also marked by a range of climatic extremes in different parts of the world:

- record-breaking rainfall and flooding in the US Southeast and southern Spain
- persistent drought across much of Central and South America
- contracting sea ice in both the Antarctic and Arctic

In the coming years, increased risk, uncertainty and volatility arising from climate change will heighten the systemic risk embedded in economies and the financial system – risk that most investors cannot diversify away. Recent estimates suggest that, without decisive action, growth in global GDP would be 30% lower by 2100 due to climate change (150% instead of 215%).²

However, the severity of economic impacts from climate change this century will depend significantly on the timing and extent of mitigation efforts. When will the economic transition to net-zero emissions be achieved? To what extent will adaptation and resilience measures succeed?

Climate adaptation refers to the process of adjusting to current and anticipated climate impacts. Examples include reinforcing bridges and highways to withstand more-intense storms and transitioning to drought-resilient agricultural practices in the face of climate-induced water stress.

Adaptation measures may also help to build climate resilience, which, in the investment context, means strengthening the ability of financial systems, businesses and communities to absorb climate shocks, recover effectively and continue functioning in the face of long-term climate-related disruptions.

To date, much investor action on climate-related risk has focused on climate mitigation: reducing carbon emissions with the aim of limiting the long-term rise in global temperatures. However, research shows these efforts will not be enough to limit significant physical and economic damage without adaptive interventions. Under a scenario that assumes a large reduction in greenhouse gas emissions (but no adaptation efforts), costs tied to climate-driven damage for S&P Global 1200 companies are projected to rise each year from \$885 billion in the 2030s to \$1.2 trillion in the 2050s and \$1.6 trillion in the 2090s.³

The cost of financing adaptive measures globally could run into the trillions of dollars by 2030, particularly in critical sectors such as infrastructure, agriculture and water resource management. However, current financing is insufficient to address the challenges ahead and the funding gap is widening, increasing the reliance on private sector finance. Developing countries alone face an annual adaptation-finance gap of approximately US\$187 billion to US\$359 billion.⁴

1 World Meteorological Organisation (2025) [WMO confirms 2024 as warmest year on record at about 1.55°C above pre-industrial level](#)

2 Network for Greening the Financial System (2024) [NGFS long-term scenarios for central banks and supervisors](#)

3 S&P (2025) [For the world's largest companies, climate physical risks have a \\$1.2 trillion annual price tag by the 2050s | S&P Global](#)

4 UNEP (2024) [Adaptation Gap Report 2024](#)

RELEVANCE TO INVESTORS

Investors have a fiduciary duty to assess and manage financially material risks. Evidence is growing of the impact of climate change on asset values and long-term portfolio performance. As a result, investors are increasingly viewing – and assessing – climate risk as a material risk.

The work of adapting and increasing resilience to climate change falls to company management, however investors have a role to play. They can assess their investments' exposure to physical and transition risks. They can engage with investees to encourage implementation of appropriate adaptation measures. They can invest in companies developing technologies that enhance climate resilience (see Investor Action for more detail).

The imperative of adapting to climate change is creating investment opportunities. For example, research has found that an estimated US\$1.8 trillion invested in climate adaptation measures before 2030 could generate US\$7.1 trillion in net benefits to the global economy if focused on priority areas such as early warning systems, resilient infrastructure, climate-smart agriculture, mangrove protection and water resilience.⁵ Investors indicate that companies benefit from adaptation measures in multiple ways:

- reduced insurance premiums
- maintenance of core revenue streams
- increased energy efficiency
- reduced damage from extreme climate events
- faster recovery after extreme climate events

RECENT GOVERNMENT ACTION

Government efforts to address climate risk have also to date focused on mitigation in the wake of the 2015 Paris Agreement. The Agreement's objective to limit the increase in the global average temperature to well below 2°C above pre-industrial levels also advocated a 1.5°C target due to significantly higher risk above that level.

However, the Paris Agreement also highlighted the importance of strengthening resilience against the impacts of climate change. Article 2.1(b) of the Agreement has an explicit aim of “increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development.” Additionally, Article 2.1(c) emphasises the importance of aligning financial flows “with a pathway towards low greenhouse gas emissions and climate-resilient development.”

More recently, adaptation and resilience have received renewed focus following COP28, held in Dubai in December 2023. An outcome of that conference, the UAE Framework for Global Climate Resilience, facilitates the development of National Adaptation Plans. Through these plans, countries identify medium- and long-term climate risks, set strategic priorities to adapt to those risks, and articulate how finance will be mobilised from different sources to implement those priorities.

The UAE Framework also put forward a Global Goal on Adaptation, for which a structured approach was launched at COP29 in Baku in 2024, the Baku Adaptation Roadmap. Baku delegates also set a New Collective Quantified Goal on Climate Finance (NCQG), committing to deliver \$300 billion annually by 2035, and to work towards mobilising \$1.3 trillion over the same timeframe to fund climate mitigation and adaptation in developing nations.

⁵ Global commission on adaptation (2019) [Adapt now: A global call for leadership on climate resilience](#)

INVESTOR ACTION

Investor action falls into three broad categories with multiple options within each (see Figure 1). Much depends on the tools and leverage available to investors, which may vary by asset class.

This section outlines these actions (and others) in more detail.

Figure 1: Key investor actions



INVESTMENT PROCESS



Investors can include climate adaptation and resilience considerations in different elements of the investment process, although how these are put into practice may vary based on factors such as asset class, whether assets are managed internally or externally, and the level of internal resources. This section focuses on the following elements:

- Climate policy:** outlining the organisational approach to climate adaptation and resilience, such as part of an overarching climate policy or position statement;
- Climate strategy:** building climate adaptation and resilience considerations into the investment strategy;
- Integration:** integrating analysis of climate adaptation and resilience into investment decision-making and stewardship efforts.

CLIMATE POLICY

Investors can adopt public commitments on climate adaptations and resilience, for example by including such factors in an organisational climate policy. This could include:

- any overarching goals or ambitions – for example, how governments' National Adaptation Plans might inform the investment approach;
- details on how adaptation and resilience are incorporated in the investment process – for example, as part of screening potential investments or investing thematically in companies developing climate solutions;
- stewardship goals – for example, requiring physical climate risk assessments by investees and relevant adaptation measures.

As with all responsible investment issues, it is good practice for these commitments to be approved at the more senior level and communicated throughout the organisation.

PRI resources

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|--|--|
| Developing and updating a responsible investment policy | |
| An introduction to Responsible Investment: Climate change for asset owners | |

CLIMATE STRATEGY

A climate investment strategy details the key steps and actions an investor will take to implement its climate policy. As such, any climate adaptation and resilience commitments in the climate policy should be built into the investment strategy.

Governance elements that can be applied across strategies include:

- identifying the investment strategy purpose and baseline. This includes assessing physical and transition-related risks and opportunities to set the strategy's key adaptation objectives. Objectives could include:
 - setting targets for the amount to be invested in climate adaptation and resilience solutions;
 - setting targets for the percentage or number of investees that have carried out physical climate risk assessments and/or implemented required adaptation measures;
 - supporting governments to develop policy plans and regulations, such as National Adaptation Plans, that define specific opportunities and/or an overarching framework for investing in adaptation and resilience.
- defining the appropriate internal governance and accountability, as well as internal training and awareness-raising, to support the achievement of investment strategy targets;
- establishing mechanisms for reviewing the strategy regularly, including periodic monitoring of risks and opportunities as they evolve, and reporting on the strategy's effectiveness.

The specific details of the investment strategy will then depend heavily on whether funds are managed internally or externally.

Asset owners investing through external managers will rely on their managers to execute their strategy. As such, the selection, appointment and monitoring process is critical to ensuring alignment on any climate adaptation and resilience considerations (see the appendix for a list of potential questions for asset owners to ask investment managers).

For investment managers, the strategy will largely be executed through integrating climate adaptation and resilience factors into the investment process and through their post-investment stewardship and value creation activities, covered in the following sections.

PRI resources

**Asset owner strategy guide:
How to craft an investment strategy**



INTEGRATION

Investors can incorporate climate adaptation and resilience considerations in investment decision-making and post-investment activities through:

- building the understanding and capacity of investment teams and other key internal stakeholders through training and knowledge-sharing;
- conducting climate-related risk assessments and scenario analyses and using the findings to support investment decisions. For example, do physical climate risk assessments identify any particular geographies, sectors or individual investments potentially exposed to higher risks? How might such risks influence asset or security valuations over the investment time horizon?
- identifying opportunities to allocate capital directly to climate adaptation and resilience solutions;
- identifying where to prioritise monitoring and stewardship and value creation efforts post-investment.

PRI resources

**Assessing physical climate risk
in private markets: A technical guide**



**ESG integration in listed equity:
A technical guide**



**An introduction to responsible investment
in fixed income**



**Guide for limited partners:
Responsible investment in private equity**



**ESG incorporation in direct lending:
A guide for private debt investors**



STEWARDSHIP



Stewardship is the use of influence by investors to protect and enhance overall long-term value, including the value of common economic, social and environmental assets, on which returns and client and beneficiary interests depend. Irrespective of asset class, and whether investments are made directly or through external fund managers, all investors can be active owners of their investments, by developing and disclosing an active ownership policy and engaging on climate adaptation and resilience-related issues.

PORTFOLIO COMPANIES AND ASSETS

Tools and activities for investee stewardship differ by asset class, but might include:

- Listed equity
- Private equity
- Fixed income
- Real assets

Listed equity

Individual or collaborative engagement with investees to better understand approaches to managing physical climate risks, for example, and to help identify potential adaptation and resilience measures that can manage risks and drive shareholder value.

Private equity

Using influence (for example, through board seats and management teams) with investments to build understanding and action on adaptation and resilience as appropriate.

Fixed income

Individual engagement with current or potential issuers regarding risks and opportunities tied to climate adaptation and resilience, e.g. labelled debt with use of proceeds targeting adaptive measures.

Real assets

Implementing necessary adaptation and resilience measures where assets are owned and operated directly, and/or using influence with investments to build understanding and action on adaptation and resilience.

COLLABORATIVE AND POLICY ENGAGEMENT

Investors might also participate in industry initiatives such as those in Table 1. These may support investor efforts to enhance industry awareness and practice on adaptation and resilience, as well as help to develop policy, regulation and standard-setting on the issue.

Table 1: Examples of industry initiatives

<u>The Climate Financial Risk Forum (CFRF)</u>	Convenes a working group to develop frameworks and guidance aiming to mobilise adaptation finance to build resilience. The CFRF is jointly convened by the UK Prudential Regulation Authority (PRA) and Financial Conduct Authority (FCA).
<u>The Adaptation and Resilience Investors Collaborative (ARIC)</u>	Works to accelerate and scale up private investment in climate adaptation and resilience in developing countries. The international partnership of development finance institutions is convened by the United Nations Environment Programme Finance Initiative (UNEP FI).
<u>The Global Adaptation and Resilience Investment Working Group (GARI)</u>	Brings together private and public sector investors, bankers, lenders and other stakeholders to discuss critical issues at the intersection of climate adaptation and resilience and investment. Its goal is to assess, mobilise and catalyse action and investment. GARI is an official partner of the UN Secretary General's Anticipate, Absorb, Reshape (A2R) Climate Resilience Initiative.
<u>The Physical Climate Risk Assessment Methodology (PCRAM) Working Group</u>	Aims to standardise risk assessment, bridging the gap between the infrastructure and financial sectors by providing a consistent approach for evaluating climate risks across both public and private finance. The working group developing and implementing the methodology is convened by the Institutional Investors Group on Climate Change (IIGCC).

<u>Dutch Sustainable Finance Platform's Working Group on Climate Adaptation</u>	Looks at the scenarios, methods and data the financial sector needs to assess the physical impact of climate change on the economy and identifies finance and insurance solutions. The working group is chaired by the De Nederlandsche Bank.
<u>Asia Investor Group on Climate Change Physical Risk & Resilience Working Group</u>	Aims to develop solutions for investors to integrate physical risk and resilience considerations into portfolio management and drive more investment into adaptation solutions. The working group is convened by the Asia Investor Group on Climate Change (AIGCC).

PRI resources

Introductory guide to stewardship	Stewardship in private equity: A guide for general partners
A practical guide to active ownership in listed equity	Towards COP30: Climate policy priorities
ESG engagement for fixed income investors	

DISCLOSURE



Investors should disclose their climate policy commitments, practices and impacts, as well as requiring disclosure from investee companies, issuers and external investment managers. Although current investor and/or corporate climate-related disclosure requirements are more focused on physical and transition risks, rather than adaptation and resilience measures specifically, investors can keep beneficiaries and other stakeholders informed of their progress addressing climate-related risks.

This reporting can take many forms, including sustainability reports and the publication of case studies. Possible actions include:

- disclosing how climate adaptation and resilience-related issues are incorporated into investment practices;
- disclosing stewardship activities related to climate adaptation and resilience, such as engagement and voting;
- engaging with investee entities to measure and disclose their climate adaptation and resilience risks and opportunities;
- aligning disclosure asks and own practices with relevant standards and frameworks;
- communicating with beneficiaries about climate adaptation and resilience-related issues;
- reporting on progress and/or achievements relating to climate adaptation and resilience.

APPENDIX

SELECTION, APPOINTMENT AND MONITORING OF INVESTMENT MANAGERS

Asset owners should assess how external managers' approaches to climate adaptation and resilience align with their own approach during due diligence and as part of ongoing monitoring.

Below are examples of questions that asset owners can ask their managers during these processes, noting that this is not a comprehensive list but a basis for discussion and for gathering further information.

GOVERNANCE

- Are climate adaptation and resilience considerations included in your (climate) investment policy?
- Has your organisation included the monitoring of climate-related issues as part of the board's and/or management group's oversight responsibilities?
- How is progress on climate adaptation and resilience reviewed, by whom and how often?
- How is your organisation building experience and knowledge of climate adaptation and resilience, both individually and as a team?
- Have you engaged with key stakeholders to understand their views on climate change-related risks?

STRATEGY

- How are climate adaptation and resilience considerations integrated into your investment strategy?

RISK MANAGEMENT

- Has a process been established to identify, assess and monitor climate-related investment risks (physical, transition and systemic)?
- What climate-related risks and opportunities have been identified for your investments/assets?
- Do you use climate scenarios to inform your investment analysis and decision-making? If yes, what climate scenarios do you use?
- What is your process for incorporating these risks in your investment decision-making process?

TARGETS AND METRICS

- What climate-related metrics, if any, does your organisation use, and why have these metrics been selected?
- Can you describe how these metrics have affected investment decisions or informed stewardship activities?
- Has the organisation set itself targets related to climate adaptation and resilience (for example, in relation to physical and/or transition risk exposure)?

DISCLOSURE

- Does your organisation disclose and report on its risks and opportunities related to climate adaptation and resilience?
- Does your organisation require or expect its portfolio companies to disclose and report on risks and opportunities related to climate adaptation and resilience?
 - If not, please explain the rationale behind this decision.
 - If so, do you (and your portfolio companies) align with any specific framework or guidance?

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