Ireland Strategic Investment Fund (ISIF)

Climate Update 2022

Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

Ciste Infheistíochta Straitéisí d'Éirinn
Ireland Strategic Investment Fund

Contents

Introduction

The Ireland Strategic Investment Fund ("ISIF" or the "Fund") invests on a commercial basis in a manner designed to support economic activity and employment in Ireland. Responsible investment has been core to its approach from the outset, with a key focus on climate in terms of investment opportunities and managing and mitigating climate risk in both its Irish and Global Portfolios. This Report gives a broad overview of the actions and analysis that ISIF has taken to address climate change.

Introduction and Overview

Investing with impact is key to ISIF's mandate. ISIF prioritises using its capital and resources to address strategic challenges and focus on making transformational investments across its impact themes, including climate. ISIF commenced a €1 billion five-year climate action investment programme in 2021. This will be where ISIF will have its most significant impact. ISIF climate strategy encompasses all areas of the economy where carbon emissions are present such as energy, transport, built environment, waste and enterprise, and incorporates other thematic investment areas that will be key to transitioning to a Net Zero economy.

ISIF is a responsible investment investor, and integrating Environmental, Social and Governance (ESG) factors are core to its investment approach. This report focuses on Climate – a priority issue for the Fund. ISIF has been measuring and monitoring various climate related metrics across its Global and Irish portfolios for several years. Both climate data availability and methodologies differ across ISIF's portfolios, and ISIF's approach has changed and evolved alongside evolving measurement frameworks. ISIF expects this to continue. Global[1] and Irish[2] portfolio metrics are not directly comparable due to the different characteristics of the Irish and Global portfolios and the different ESG tools required.

ISIF is a responsible investment investor, and integrating Environmental, Social and Governance (ESG) factors are core to its investment approach. This report focuses on Climate – a priority issue for the Fund.

1 ISIF's Global Portfolio comprises largely publicly listed assets that are subject to significant disclosure requirements, which supports robust data analytics provided by ISS ESG.

2 ISIF's Irish Portfolio comprises largely private unlisted assets. Carbon analysis across this Portfolio is based on averaging methodology – an accepted portfolio emissions modelling approach recommended for use when gaining real, verifiable and comparable data can be challenging.

ISIF is a founding signatory to the Principles of Responsible Investment (PRI), supporter of CDP (formerly the Carbon Disclosure Project) and endorser of the One Planet Sovereign Wealth Fund (OPSWF) initiative, all of which endorse the Task Force on Climate-Related Financial Disclosures (TCFD)[3]. ISIF has been disclosing information on its climate journey annually as part of its ongoing commitments to the PRI and OPSWF. Carbon Emissions data is presented as at year-end, 2022.

TCFD recommendations are structured around four thematic areas: Governance, Strategy, Risk Management, and Metrics and Targets and are the key guidance informing ISIF's approach to climate reporting. ISIF is working towards improved integration and disclosures on all four elements to become aligned with the TCFD.

Finally, this Report focusses on ISIF's investment Portfolio, not the operations of ISIF's business unit. That said, ISIF's emissions are measured as part of the National Treasury Management Agency's (NTMA) carbon footprint. ISIF is committed to the NTMA-wide goal of being an environmentally sustainable and net zero emissions organisation by 2030.

ISIF refers to "carbon" and "emissions" interchangeably throughout this report, meaning all Green House Gas (GHG) emissions.

TCFD recommendations are structured around four thematic areas: Governance, Strategy, Risk Management, and Metrics and Targets and are the key guidance informing ISIF's approach to climate reporting.

3 Task Force on Climate-Related Financial Disclosures (TCFD) was established to develop a set of climate-related financial risk disclosures which can be adopted by companies to inform investors.

ISIF's Climate Action and Reporting Will Continue to Evolve

- This report gives a broad overview of the various actions and analyses undertaken by ISIF. ISIF's portfolio and TCFD recommendations for asset owners are evolving, particularly in the Irish portfolio, where the investments are primarily in private markets, and data gaps exist. ISIF is on a journey toward full alignment with TCFD.
- While ISIF has made progress in mitigating and managing risk through divestment, active ownership and integration of climate considerations into the Fund, ISIF is only at the start of its Net Zero journey. The following steps will focus on building relationships, partnerships and networks to support the delivery of the climate investment strategy.
- ISIF is committed to continuous improvement and some areas where ISIF will focus going forward include:
  - Reassessing current metrics and targets to become future-proofed and fit for this next decade, given the need for radical reduction of emissions globally.
  - Development of portfolio alignment metrics for the Irish Portfolio.
  - Developing deeper sector or industry expertise in order to allow for robust assessment of climate risk within companies, sectors and sub-sectors, in line with legislative requirements, EU Taxonomy guidelines, the Climate Action Plan and the Climate Action and Low Carbon Development (Amendment) Act 2021 Carbon Budgeting provisions.

ISIF’s Climate Goal

ISIF is committed to supporting the long-term transition to Net Zero in Ireland before 2050 by driving substantial emissions reductions and increasing ISIF’s positive climate impact by 2030.

ISIF will:

- Decarbonise ISIF's investment portfolio in a way consistent with achieving Net Zero emissions before 2050.
- Allocate capital to invest in assets and businesses that lower emissions and facilitate or take action to mitigate the impact of climate change.
- Utilise best practice investment frameworks and guidance to achieve Net Zero.
- Assess the climate commitments of ISIF's investees and asset managers.
- Support companies and sectors that are leaders in emissions efficiency.
- Set emissions reduction targets and measure ISIF's progress against them.
- Conduct climate financial risk assessment in line with TCFD recommendations.

ISIF's climate goal is to support the long-term transition to Net Zero in Ireland before 2050 by driving substantial emissions reductions within ISIF's portfolio and increasing ISIF's positive climate impact by 2030.

Signatory of:

Achieving ISIF's Climate Goal

ISIF aims to manage the risks and capture the opportunities that climate change presents through climate-positive investments and a whole portfolio approach to engagement and risk mitigation.

Opportunity and Impact: Climate Positive Investment

Investing for a Net Zero World

- Allocating capital to new opportunities across and Irish Portfolio.
- Integrating climate change into investment strategies.
- ISIF's climate strategy is to make investments that help position Ireland for net zero.

Engage and Influence

Whole Portfolio Approach

- Engage with external investment managers and investees.
- Improve disclosure and transparency.
- Engage with companies, stakeholders, government agencies and policy makers.
- Climate change is a systemic risk and therefore a whole of Portfolio challenge to be addressed with multiple stakeholders.

Climate Risk Mitigation (including divestment)

Measure, Monitor and Divest

- Divestment from global fossil fuel and high carbon companies, supported by exclusion list of 243 companies in which ISIF will not invest and the Fossil Fuel Divestment Act 2018.
- Develop and measure appropriate climate metrics aligned with best practices.
- Monitor climate related physical risks, transition risk and scenario analysis.
- Ongoing ESG assessment on all investments, including due diligence on climate risks.

ISIF's Climate Governance

ISIF is committed to climate action at an organisational, Fund and national level through structured decision making.

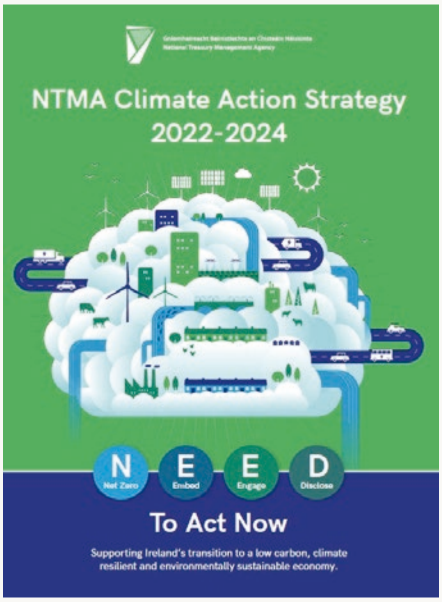
- The NTMA, is the manager and controller of ISIF. The NTMA has responsibility for the implementation of the investment strategy for ISIF including the Sustainability and Responsible Investment Strategy, which focuses on climate. The NTMA consults the Minister for Finance and the Minister for Public Expenditure and Reform when determining and reviewing ISIF's investment strategy and has regard to any views expressed by the Ministers.
- The NTMA's Investment Committee (a sub-committee of the NTMA Board), makes decisions on the investment of Fund assets (including disposal of investments) within the terms of the investment strategy agreed by the Agency, make recommendations to the Agency on the investment strategy for the Fund and oversees its implementation. The Investment Committee also receives updates on ESG and climate-related matters across the portfolio.
- ISIF has a dedicated Responsible Investment team and separate Climate Investment team. All investment proposals include an assessment of the carbon intensity of the potential investment together with its impact on the overall portfolio carbon intensity.

ISIF Governance

Climate risks and opportunities are considered as part of ISIF's overall investment approach and decision-making process.

NTMA Governance

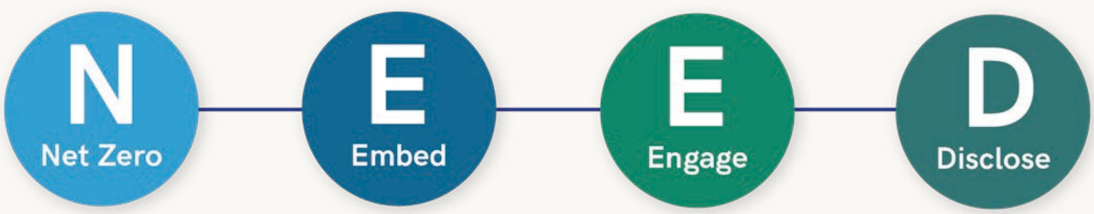
- The NTMA supports various actions contained in the Government's Climate Action Plan (CAP) 2023 with the NTMA Climate Action Strategy 2022-2024. The overarching objective of NTMA's climate strategy is to ensure that the NTMA builds on its leadership role in sustainable finance to support the delivery of the Government's climate action initiatives through its mandates and to be a Net Zero emissions organisation by 2030.



- To do so, the NTMA commits to integrating climate action into its business decisions, including investment, in the context of delivering its mandates to the Government and being an environmentally sustainable and impactful organisation. As per the NTMA Climate Action Strategy, the NTMA's climate goals comprise external and internal deliverables to be achieved through its business mandates, processes and systems. The four goals, Net Zero, Embed, Engage and Disclose, reflect the current work with targets to further enhance the NTMA's drive to support the government's climate action commitments. The goals also commit the NTMA to be environmentally sustainable, reflecting the "NEED To Act now."

- The oversight and monitoring of the NTMA's Climate Action Strategy is a priority for the NTMA Board and Executive Management Team (EMT). The Chief Financial and Operating Officer (CFOO), with the support of the Senior Business Manager Sustainability (SBMS), is responsible for coordinating combined climate action efforts across the NTMA.

- The NTMA Sustainability Group, established in 2019, oversees the delivery of the NTMA Climate Action Strategy while facilitating cross-unit collaboration and information sharing concerning climate-related activities. Alignment with the Public Sector Climate Mandate (July 2021), a CAP21 action, is also a key consideration for this group. The NTMA has also established an employee-led Green Team to support the aim of the NTMA to be a recognised leader in sustainable workplace practices in Ireland. The Green Team assists in embedding new environmentally sustainable behaviours among all employees and consists of committed and engaged employees who undertake sustainable initiatives in addition to their other responsibilities.



Key Legislative Frameworks

Climate Action and Low Carbon Development (Amendment) Act 2021

- It provides, inter alia, for the approval of plans by the Government in relation to climate change for the purpose of pursuing the transition to a climate resilient, biodiversity rich and climate neutral economy by no later than year-end 2050, and also provides for carbon budgets to provide for a reduction in greenhouse gas emissions.
- It sets a 'national climate objective' which provides that the State shall, so as to reduce the extent of further global warming, pursue and achieve, by no later than the end of the year 2050, the transition to a climate resilient, biodiversity rich, environmentally sustainable and climate neutral economy.
- Embeds the process of carbon budgeting.
- Strengthens the role of the Climate Change Advisory Council.
- Public Bodies, including the NTMA, will be required, in so far as practicable, to perform their functions in a manner consistent with, among other things, the most recent approved national climate plan and different strategies and the furtherance of the achievement of the national climate objective.

Fossil Fuel Divestment Act 2018

- This Act was signed into law by the President of Ireland in December 2018. The Act provides for the divestment by ISIF from fossil fuel undertakings (effectively, companies that derive 20% or more of their revenues from the exploration, extraction and/or refinement of a fossil fuel (oil, natural gas, peat, coal or any derivative thereof intended for use in the production of energy by combustion).
- Ireland was one of the first countries to divest public money from fossil fuel investments. ISIF remains one of the few sovereign development funds globally to implement a fossil fuel divestment strategy.
- ISIF has developed a list of 243 fossil fuel companies in which it will not invest, as determined by criteria within this Act.
- This list is updated on a semi-annual basis in line with a methodology which is aligned with the legislation and is available on ISIF's website.

Sustainable Finance Disclosure Regulation (SFDR)

The Sustainable Finance Disclosure Regulation (SFDR) (Regulation (EU) 2019/2088) came into force on 10 March 2021 and imposes disclosure requirements for financial products as defined under SFDR. These requirements include disclosing sustainability-related information for financial products that (i) promote (among other characteristics) environmental and/or social characteristics (Article 8 products) or (ii) have a sustainable investment objective (Article 9 products), both as defined under SFDR.

(*ISIF is not subject to SFDR but certain ISIF Investment managers are.)

The Sustainable Finance Disclosure Regulation (SFDR) (Regulation (EU) 2019/2088) came into force on 10 March 2021 and imposes disclosure requirements for financial products as defined under SFDR.

ISIF’s Climate Strategy

ISIF’s Irish portfolio climate strategy is to make investments that help position Ireland for the net zero carbon economy envisaged under the national Climate Action Plan and improve the resilience of the Irish economy as the global market increasingly pivots towards sustainable business practices.

Breaking the Link Between Economic Growth and GHG Emissions

Multi-strand strategy from infrastructure to technology. ISIF will target investments and partnerships that can materially advance the decarbonisation of the Irish economy (and contribute to decarbonisation initiatives throughout the world) in the short, medium, and long term.

2030 Transition Portfolio

Capital Intensive Investments, that will help Ireland achieve the 2030 emissions goal.

Sustainable Infrastructure

- Less carbon

Enabling Ecosystem

- More efficient

- Aligned with the Climate Action Plan.
- Crowd in private capital.
- Partner with strategic players to bring best-in-class expertise to Irish market.

Net Zero Portfolio

Portfolio of options, investments that will help set Ireland on the path to Net Zero by 2050 or earlier.

New Technologies and Business Models

- Decarbonise ‘difficult’ sectors
- New energy and economic paradigms
- Resilient to climate

- Invest in global platforms to connect Ireland into a world class climate network and attract top emerging companies to Ireland.
- Leverage ‘test bed’ size of Irish economy to prove new solutions and deploy in Ireland.
- Big ideas with transformative impact.

Opportunity and Impact – Climate Positive Investment

€1bn additional investment is targeted for climate action projects over 5 years

Positive climate investment and impact – ISIF plans to target €1bn in climate action projects over five years through investments in areas including:

- Renewable energy infrastructure
- Cutting-edge climate technologies
- Energy efficiency
- Energy storage

2022 saw c. €88m of investments close with a growing pipeline of attractive opportunities for 2023. This brings total commitments to c. €222m since the €1bn target was announced in late 2021, and total ISIF climate related investments at end 2022 to c. €500m.

In 2022 those investments were:

Solas Sustainable Energy Fund ICAV

- ISIF committed €20m to a new fund which supports residential and commercial energy efficiency projects in Ireland.
- This investment aligns with ISIF's climate strategy to make investments that help position Ireland for the net zero carbon economy envisaged under the national Climate Action Plan.

Energy Impact Partners (EIP)

- ISIF made an aggregate €68m commitment to EIP's Europe and Frontier funds.
- EIP is focused on late-stage venture and growth equity investments in the energy transition and plans to invest in emerging Ireland-based decarbonisation and energy technology companies.
- The direction of more international capital to the Irish decarbonisation sector will support emerging Irish businesses in the climate space and help Ireland on its climate journey.

SOLAS CAPITAL

Whole Portfolio Approach – Case Studies

Demonstrating impact is not limited to investments made specifically under ISIF's climate strategy. ISIF's other investments also demonstrate strong climate credentials.

Case Study: Green Generation

During 2022, ISIF committed €12m of senior debt facility to ClonBio Green Gas Limited (trading as Green Generation) which owns and operates an established and rapidly scaling biogas and biomethane production facility in Nurney, Co Kildare. The business also has Ireland's only privately owned onshore gas injection point in Cush, Co Kildare.

The company is a 50:50 joint venture between ClonBio Group Ltd, which owns and operates Europe's largest biorefinery as well as four biogas assets across Europe, and the Costello family who are involved in biogas and pig/cattle farming in Ireland, the UK and Germany. Green Generation uses anaerobic digestion to convert agricultural and food waste into renewable energy. The biogas produced is upgraded to biomethane which can be injected into the natural gas grid and thereby displace the need for fossil-based gas.

ISIF's debt facility will primarily be used to increase biomethane production within the business. ISIF's investment in Green Generation provides a platform to scale the biomethane sector which is now a central part of Ireland's Climate Action Plan. The national plan has ambitious targets to produce 5.7TWh of biomethane by 2030 and thereby help with the decarbonisation of the agriculture and heavy transport sector in Ireland.

Case Study:
ATA Responsible Business Reporting

Introduction

ISIF invested €15m in Rub Edibrac Ireland Limited (trading as ATA), the Cavan based manufacturer of precision engineering tools, in May 2019 to support the company's long-term growth plans and in line with ISIF's strategy to support the scaling of indigenous businesses.

ATA is dedicated to being one of the leading sustainable manufacturers of precision cutting tools. They recognise the importance of protecting the environment, contributing positively to the communities and societies where they operate and operating as a responsible business. In 2022, ATA published its first Responsible Business Report, which outlines the company's efforts and future ambitions and is a roadmap for working towards its 2031 environmental targets.

ATA's Strategic Objective is to transition towards a Net Zero organisation which will better position it to capture future customer demand from sustainable industries. ATA will achieve this by setting meaningful targets, supported by a dedicated programme of initiatives and consistently monitor and report its progress.

OUR PLANET TARGETS

SDG	Target	Timeframe
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	Reduce our Scope 1 and Scope 2 CO_2 emissions by over 40% versus our 2019 baseline.	2030
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	Attain a minimum B grade in our Carbon Disclosure Programme (CDP) certification.	2030

Case Study:
ATA Responsible Business Reporting

Improving Energy Efficiency

In developing their Responsible Business Plan, ATA conducted a thorough review of energy consumption at each of their facilities. Along with implementing initiatives and projects at each site for reducing energy usage, ATA are actively seeking to source and generate renewable sources of energy at its manufacturing sites where it is a viable option. These important drivers will ensure continued progress towards achieving the 2031 carbon reduction goals.

Reducing Energy Consumption in manufacturing operations year-on-year is key to cutting ATA's carbon footprint as well as reducing operating costs. For 2023, each site has set targets to decrease energy consumption by 10% vs the 2019 baseline and to improve efficiency for 2023, to support meeting short-term (2031) Scope 1 and Scope 2 emission reduction goals. Initiatives will be delivered through capital spend projects.

In 2023, an assessment of the commercial and technical feasibility of installing renewable energy generation at each of the ATA operating sites has been conducted to determine its viability.

Tracking Carbon Intensity

In addition to measuring the organisation's carbon footprint, ATA tracks the carbon intensity of its operations expressed in tonnes of $C0_2$ emitted per the weight of good shipped and also in revenue per metric tonnes of C02 emitted. Carbon intensity metrics reflects improved business process that reduce the amount of carbon emitted per unit of measurement (kg of goods shipped or per unit of revenue) even in situations when total emissions increase.

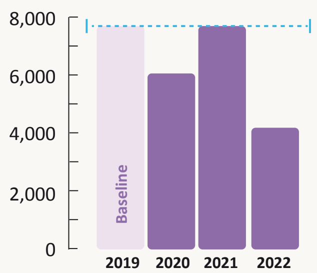
In 2023, an assessment of the commercial and technical feasibility of installing renewable energy generation at each of the ATA operating sites has been conducted to determine its viability.

Case Study:
ATA Responsible Business Reporting

Creating a comparative metric for carbon intensity based on the volume (weight) of goods shipped allows ATA to measure the carbon footprint of their activities when the business expands or contracts.

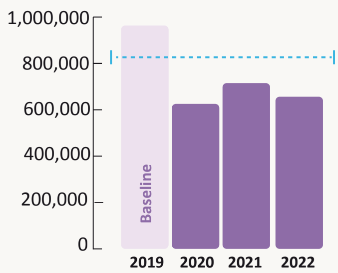
Carbon Intensity (by weight)

Scope 1,2 & 3 (tCO_2e)



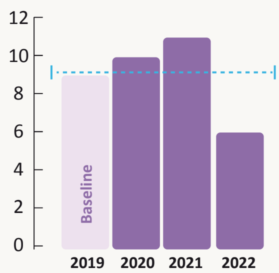
-47%
Difference to 2019

Goods Shipped by Site (kg)



-21%
Difference to 2019

Emissions by Weight
(tCO_2e per MT)

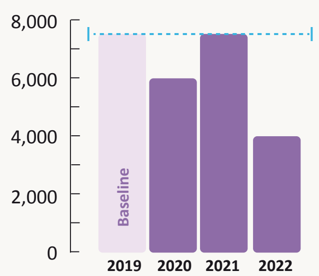


-33%
Difference to 2019

Expressing carbon intensity in terms of unit of revenue allows the group to undertake high level comparative analysis of its performance vs other entities, including those outside its peer group.

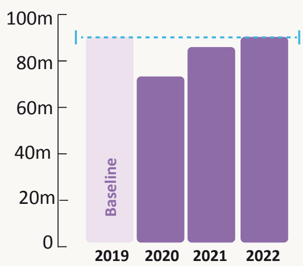
Carbon Intensity (by revenue)

Scope 1,2 & 3 (tCO_2e)



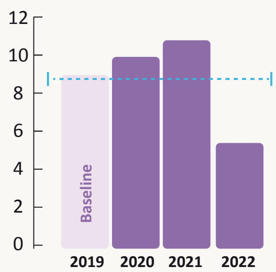
-47%
Difference to 2019

Revenue (€)



1%
Difference to 2019

Emissions by Weight
(tCO_2e per €)



-47%
Difference to 2019

Case Study: Opera Square

About Opera Square

In January 2023, ISIF committed €65.5m in aggregate (by way of limited partnership commitments and senior debt commitments) to Limerick Opera Investment Limited Partnership a newly established joint venture partnership with Limerick Twenty Thirty Strategic Development DAC ("LTT") for the development of One Opera Square, a 135,000 sq. ft Grade A office building on the Opera Square site in Limerick City Centre. Opera Square is a large, mixed-use urban regeneration project in the centre of Limerick. Its redevelopment is a key strategic endeavour of LTT and Limerick City and County Council ("LCCC") to reverse suburban development patterns and deliver a flagship city centre destination. One Opera Square will be the first building to be delivered on the site which will also create a new city library, public plaza, hotel, bar and office space in the heart of Limerick City.

ISIF's investment in One Opera Square was delivered as part of ISIF's €500m investment programme targeting balanced economic development and growth in Ireland's 5 regional cities – Cork, Limerick, Galway, Waterford and Kilkenny – while also making the cities more attractive places to live and work. The One Opera Square joint venture is the largest direct investment under this programme to date and provides a platform for further investment in Limerick in the coming years.

OPERA SQUARE
LIMERICK

Case Study: Opera Square

Sustainability Accreditations

One Opera Square will be developed to the highest international sustainability standard by achieving LEED Platinum accreditation as well as 'Nearly Zero Energy Building' (nZEB) rating, WiredScore Platinum and WELL certifications. LEED certified buildings have the highest energy efficiency, lower carbon emissions and create healthier places for people to work and live. They are a critical part of addressing climate change and meeting ESG goals, enhancing resilience and supporting more equitable communities.

Opera Square is also a circular economy demonstrator project and received funding under the Environmental Protection Agency's Circular Bioeconomy Programme. In a circular economy, buildings and construction materials are kept in use for as long as possible, reused, repaired for reuse and recycled, to minimise the amount of waste generated. The Opera project was shortlisted at the Sustainable Business Awards 2023 in the Waste/Circular Economy category.

The Opera Square project, through the leadership of LTT, is seeking to minimise construction and demolition waste through implementation of 'circular economy' principles and sustainable construction processes. A collaboration between LTT, Atlantic Technological University and Southern Waste Management Region Office was established to track waste and resources during the demolition and enabling works and, as a result, 99.3% of all construction and demolition material was diverted from landfill. Material was reused both onsite and offsite for a series of initiatives including:

- 15,000 tonnes of crushed concrete reused onsite
- Cobbled stones recovered for use in the onsite public realm works
- 2,000 bricks reused in the construction of Canal Harbour Building in Limerick City
- 650 tonnes of stone reused as part of a training programme that trains disadvantaged youths in new trades
- Other material reused offsite in projects by Limerick City and County Council, Richmond Rugby Club and the Concern charity's Finucane Memorial.

Risk Management

ISIF's risk management focuses on engagement and influence, to drive change across all its investees.

Managing Investment Risk is Key to ISIF's Mandate

Climate is specified as a strategic risk by the NTMA Board and is factored into ISIF decision-making.

- **The NTMA Board expects the organisation to demonstrably factor in Climate Risk to all of its decision making.**
  - The elevation of climate risk as a strategic risk, underscores the importance the NTMA has already placed on the topic of climate action and the environment and its importance to all key stakeholders. This ensures that climate remains a strategic priority.
  - The NTMA defines climate risk as the risk that the NTMA fails to take the necessary actions to integrate climate action (as appropriate) into its business decisions in the context of delivering its mandates to the Government and delivering an environmentally sustainable organisation in line with its climate strategy.

Risk Appetite Statement for NTMA climate risk – As a public body, the NTMA must support Ireland's transition to a low-carbon, climate-resilient, and environmentally sustainable economy. The NTMA has a 'low' risk appetite for climate risk and monitors this risk via key risk indicators which are reported to the appropriate NTMA governance committees.

- **Primary risk for ISIF is the deviation of actual investment return from expected return.**
  - ISIF's investment process incorporates many controls for this risk, including the consideration of climate risk which is embedded into the investment appraisal process, and the application of ESG and responsible investment policies.
  - Climate risks are identified as part of ISIF's investment process from the first sight of a potential transaction throughout the investment lifecycle.
  - Climate risks are separately measured and monitored through a series of climate metrics modelling and measurements across ISIF's investments, both in-house (Irish portfolio) and independently through external providers (Global Portfolio).
  - The Global Portfolio is subject to climate impact assessment, including emission exposure, attribution and intensity analysis, temperature-related scenario alignment, transition and physical risk analysis. Current assessments indicate a high degree of climate-related resilience.
  - All Global Portfolio investments are reviewed per Sustainable Finance Disclosure Regulation (SFDR) requirements. (*ISIF is not subject to SFDR but certain ISIF Investment managers are.) Risk management and mitigation are part of ISIF's overarching approach to its climate strategy.
  - ISIF uses various tools, including fossil fuel divestment and active ownership. The changing regulatory environment around climate and how it affects its investments is continuously monitored.
  - Data availability is critical, and further consideration of the EU taxonomy into ISIF's decision making will be an essential factor in the future.

Engage and Influence

Over 465 climate related engagements across the Global Portfolio in 2022.

- Global Portfolio Engagement is led by EOS at Federated Hermes on ISIF's behalf. In 2022, EOS engaged with 544 companies on 2,327 environmental, social, governance, strategy, risk and communication issues and objectives of which 465 were climate related.
- EOS have expanded focus beyond traditional energy intensive sectors, such as energy supply and transportation, by seeking Paris-aligned net-zero strategies at the providers of capital, focusing on the banks and encouraging the shift to sustainable food systems that avoid deforestation and protect biodiversity, among other factors.
- Climate action remained a key priority theme for EOS in 2022 with engagement focused on a number of areas including; achieving a just transition, Net Zero ambitions that are science based (achieve by 2050 or sooner), emissions reduction targets in line with 1.5°C, climate strategy aligned to the goals of the Paris Agreement, risk management disclosed in line with the Task Force on Climate-related Financial Disclosures (TCFD).
- Looking forward, engagement will remain focused on companies having a strategy and greenhouse gas reduction targets aligned with the Paris Agreement, seeking to limit climate change to 1.5°C through science-based emissions reduction targets for Scope 1 and 2 and relevant and material Scope 3 emissions , together with Paris-aligned public policy engagement and sufficient consideration of climate change in the financial statements.
- EOS will continue to lead or co-lead collaborative engagements across multiple sectors through the Climate Action 100+ and Institutional Investors Group on Climate Change (IIGCC) initiatives.
- EOS have started engaging more systematically on physical climate risk at exposed companies, targeting the development of adaptation plans that will bring much needed resilience. EOS will strengthen its focus on the need for a 'just transition' and address the human rights impacts of climate change. EOS also support effective policy making aligned to the goals of the Paris Agreement, including support of net-zero greenhouse gas reduction targets by national governments.

Climate action remained a key priority theme for EOS in 2022 with engagement focused on a number of areas including achieving a just transition.

Engage and Influence – Examples from 2022

Rio Tinto (UK)

EOS met the company's audit committee chair to discuss climate accounting and to get further insights on limitations for the industry. EOS asked about Rio Tinto's approach to integrating climate considerations within its financial accounts. We were pleased to hear that it is mindful of evolving regulation that may make climate financial reporting mandatory in the future. The company provided reassurance that it discusses its climate considerations with its auditors and that its auditors were qualified for such discussions because it has access to the most experienced teams within audit firms. However, when we asked about climate accounting challenges for the industry, Rio Tinto said that some accounting firms lacked sufficient expertise to assess companies' climate assumptions. We queried the gaps identified by Carbon Tracker in Rio Tinto's current climate accounting. The company said that it was considering closing these gaps, but certain aspects of the assessment were challenges for the whole industry, and these have not yet been addressed.

Danone (France)

EOS met the new lead independent director (LID) to discuss governance and the strategic direction of the company following the management crisis and board refreshment. EOS asked about her priorities for the board and how she was going to assess board performance. EOS was pleased to hear that she found the new board members to be professional and independent and wished to develop a culture of trust on the board. EOS welcomed the new climate targets submitted by Danone to the Science-Based Target initiative and asked for a roadmap with interim targets.

AIA Group (Hong Kong)

EOS welcomed the company's recent commitment to net-zero emissions by 2050 and confirmed that this applies across Scopes 1, 2 and 3. AIA has committed to setting science based targets, for which the current plan is to follow the below 2°C scenario, and to set a goal for all portfolio companies to have science-based targets by 2040. While these are good steps, we expect the interim targets to be more ambitious, in line with a 1.5°C scenario and think the 2040 deadline is too slow.

BMW (Germany)

EOS had a positive meeting with the head of public affairs and his team, where they presented their plans to publish a group climate policy report. EOS has engaged extensively on this issue and acted as a liaison with investors challenging BMW with a shareholder resolution. EOS welcomed that the company is finally planning to respond to investor expectations and made suggestions for some key points to be included in the report. EOS stressed that an essential component would be a detailed description, with examples, of the actions that BMW takes if it identifies any misalignment between the lobbying positions of trade associations and the policy environment required to make a 1.5°C trajectory possible

NatWest (UK)

EOS recommended voting in support of the bank's climate strategy as NatWest currently demonstrates best practice disclosure and has a high-level strategy that appears ambitious. Although this strategy is not as detailed as those at some of its peers, it has committed to publishing a climate transition plan including sector-specific decarbonisation targets for 2030. Through engagement with the bank's head of climate, EOS were satisfied that the bank is aiming to align its financing activity with 1.5°C. The climate transition plan would reflect this ambition, including 1.5°C-aligned targets that would be accredited by the Science-Based Targets initiative.

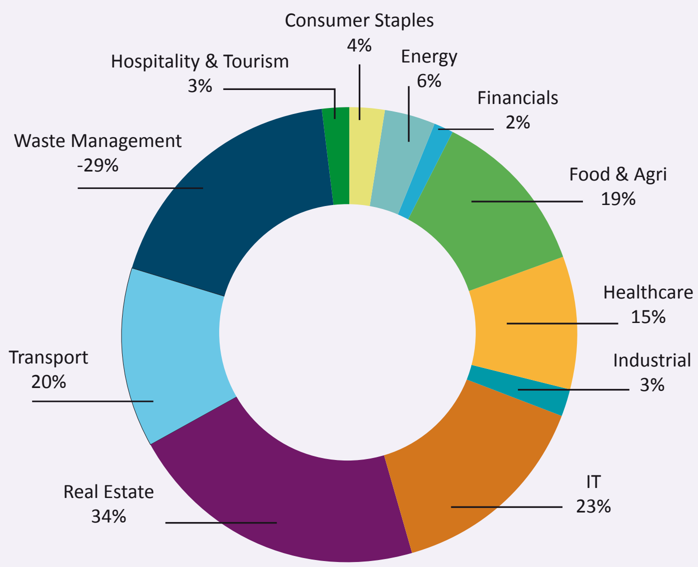
Irish Portfolio GHG Emissions Modelling

ISIF measures and monitors climate risk within the Irish Portfolio, focusing on the portfolio's Weighted Average Carbon Intensity ("WACI"), in line with TCFD recommendations.

Weighted Average Carbon Intensity (WACI – tCO_2e per €m revenue)

The 2022 WACI will be used as the base line comparison for all new ISIF transactions to assess potential impact on Portfolio level carbon emission intensity.

ISIF WACI by Sector Contribution as at end 2022

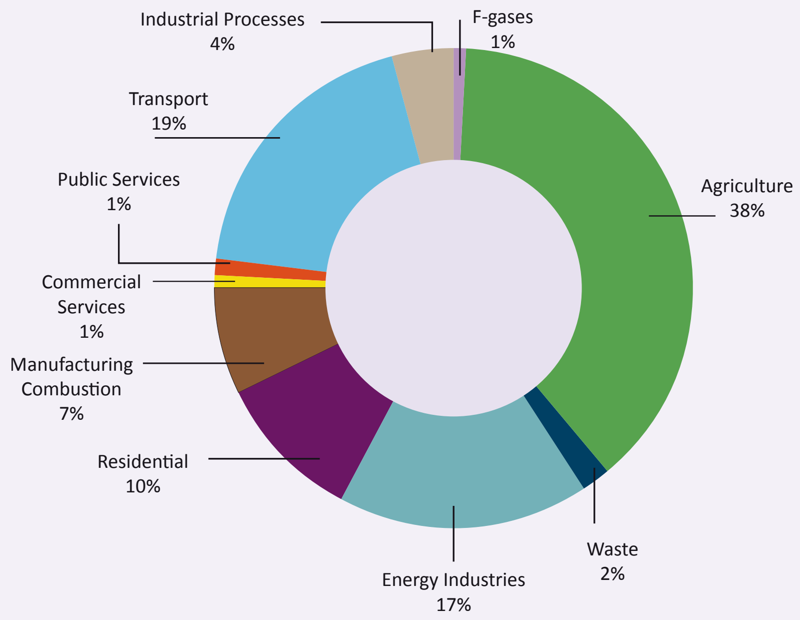


- ISIF's Irish Portfolio WACI as of 31 December 2022 is estimated to be c. 325 tCO_2e per €m revenue. All Irish companies are assessed on scope 1, 2 and upstream scope 3.
- The WACI is an additional whole of portfolio overlay metric based on the modelled carbon intensity metrics.
- ISIF aim to reduce the WACI over time to a targeted 51% intensity reduction of the 2030 Portfolio WACI based on a fully invested fund in line with the current ISIF strategy and sector exposures, which may change over time and vary due to the modelled nature of this calculation at present.
- ISIF's priority is to use WACI and other metrics to identify areas of higher climate risk exposure within the Portfolio, to engage further with the most relevant investees on their climate strategy and to obtain actual emissions data where possible.
- WACI components by sector demonstrate how the size of commitments made across sectors contribute to the overall portfolio result.

ISIF's Sector Emissions Mix Is Different to Ireland's Sector Mix

At an economy level Ireland is targeting a 51% emission reduction by 2030, with agriculture and transport being the key challenges.

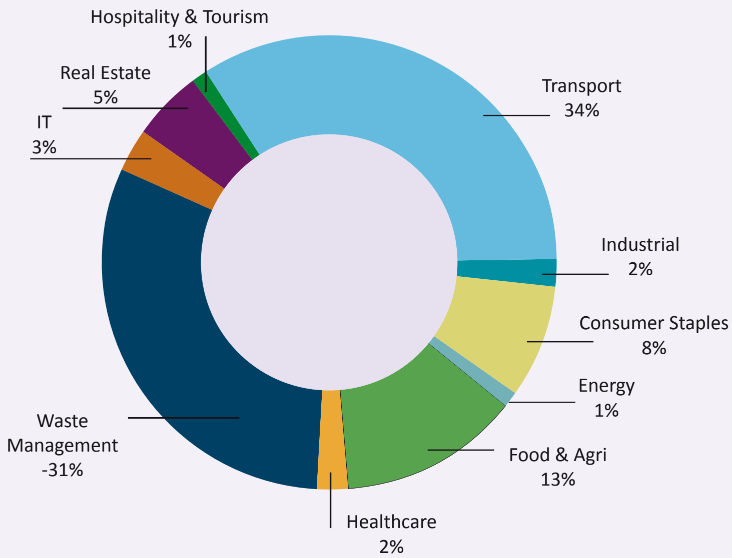
Ireland Emission Mix – 2022



Source: Greenhouse gas emissions share by sector in 2022: Environmental Protection Agency, Ireland (June 2023)

Similarly, transport and food and agriculture are the highest emission sectors in which ISIF invests. However, ISIF's waste management investments are net negative emitters.

ISIF Absolute Emission Mix – 2022



Source: Portfolio emissions are estimated using sector intensity benchmarks and revenue data from underlying investees.

Measuring Avoided Emissions or Carbon Saved

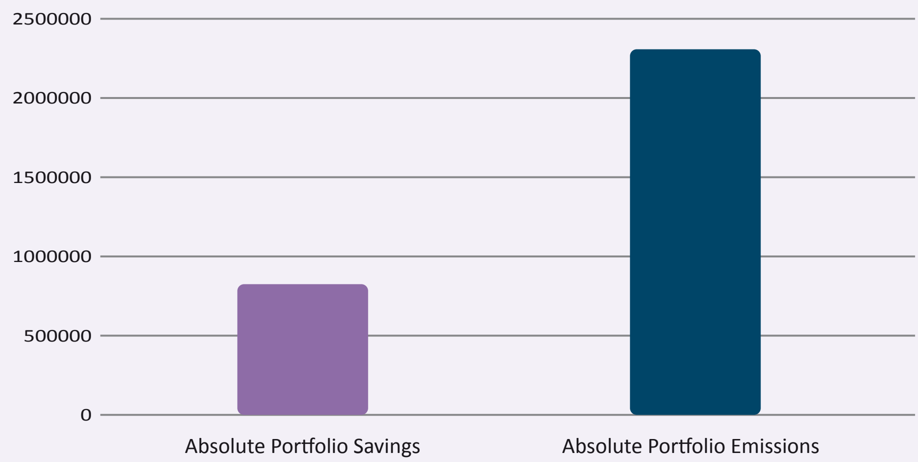
ISIF invests in renewable technologies which can help avoid emissions by offering a clean energy alternative to coal and fossil fuels. Measuring avoided emissions provides further context to ISIF's positive climate journey alongside its carbon footprint.

The impact of renewable energy investments can be expressed as carbon emissions avoided by not burning fossil fuels.

Key Performance Indicators

- Total carbon savings from renewable technologies in 2022 equated to c.796k tCO_2e as compared to c. 2,297k tCO_2e of Absolute Portfolio Emissions.
- This equates to 31% of the estimated total carbon emissions from ISIF investees in the Portfolio (at year-end 2022).
- The jump in absolute emissions from the portfolio has been driven by our exposure to the recovery of the international air transport sector.
- Carbon savings to date have been achieved entirely through wind projects. This will extend to other technologies and increase as new projects come online.
- Assets need to be operational to be included, therefore other renewable investments not yet generating power are not included in these results.
- Avoided emissions are not a carbon offset.

Annual Carbon Savings

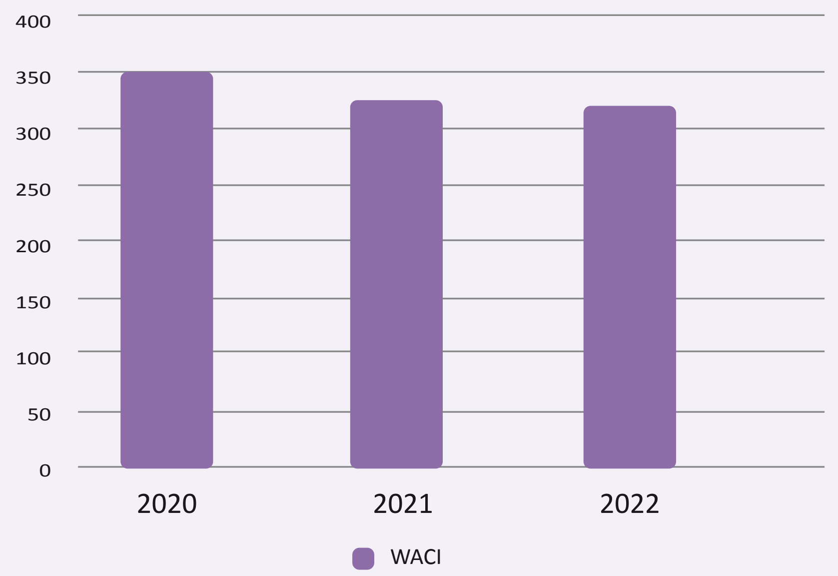


ISIF Forestry Investments support 10,639 hectares of Forestry which contribute to Ireland's carbon removals target

ISIF Trends 202-2022

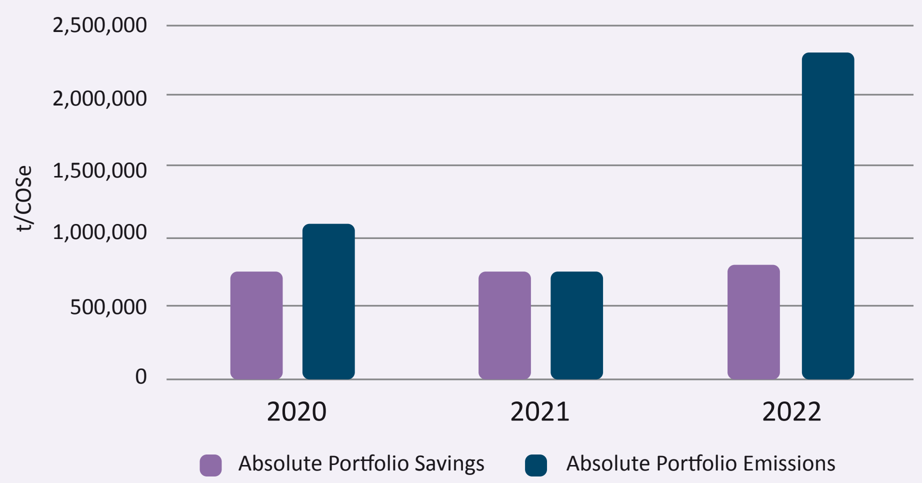
ISIF's Irish Portfolio WACI as at 31 December 2022 is estimated to be c. 325 tCO_2e per €m revenue as compared to c. 335 tCO_2e per €m revenue in 2021. The WACI metric is determined by the sector split of ISIF capital committed.

WACI Comparison



The rise in absolute emissions is driven by our 2020 commitment to the international air transport sector and the recovery seen post covid.

Emissions Comparison



How Does a WACI of 325 tCO_2e per €m revenue Compare

ISIF's Irish Portfolio WACI is lower than current reference benchmark and will reduce overtime.

ISIF Irish Portfolio WACI relative to Modelled Benchmarks

ISIF's mandate and portfolio composition mean there are no comparable market benchmarks for measuring the portfolio's emissions intensity.

ISIF's Portfolio's WACI, is lower than the expected emissions of ISIF's Portfolio based on the broad sectors in which it invests, the modelled benchmark.

The **Modelled ISIF Benchmark WACI** is calculated based on current targeted sector exposure and estimated sector emissions intensity **(Scope 1, 2 and upstream Scope 3)**.

Setting an appropriate emissions reduction target for ISIF Portfolio in line with 51% target emission reduction at economy wide level:

- The Target 2030 Portfolio WACI is a 51% intensity reduction based on a fully invested fund in line with the current ISIF strategy and sector exposures, which may change over time.
- ISIF will align its sectoral emission targets with those set out by Carbon Budgets and new Climate Action Plan 2023 as applicable to its mandate.
- ISIF will revise the 2030 target to reflect these developments together with ISIF's sectoral exposure as compared to broad sector mix of Irish economy.

Global Portfolio Climate Analytics

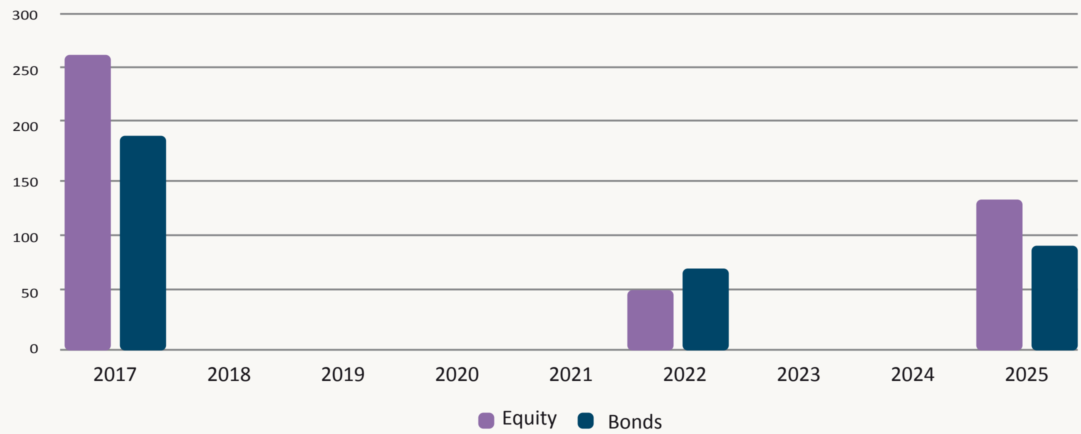
ISIF measures and monitors climate risk within the Global portfolio, looking at various metrics, including carbon intensity and how the portfolio performs in specific scenarios. The results show that ISIF has made significant progress towards its goals.

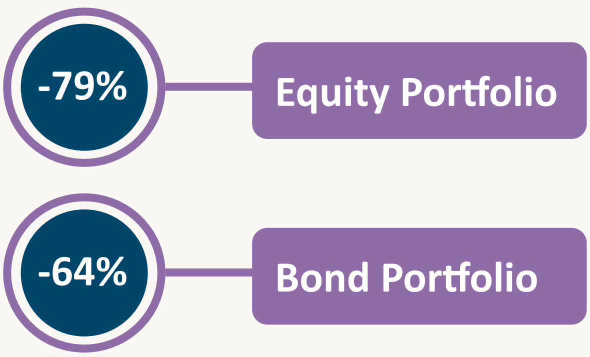
Emissions Intensity Reductions – Target of 50% Reduction by 2025

In 2022 ISIF met the carbon intensity target of the Global Equity Portfolio and the Global Bond Portfolio reduction of 50% ahead of its target of 2025.

This reflects the impact of Fossil Fuel related divestment which commenced prior to year-end 2018.

31 Dec 2022

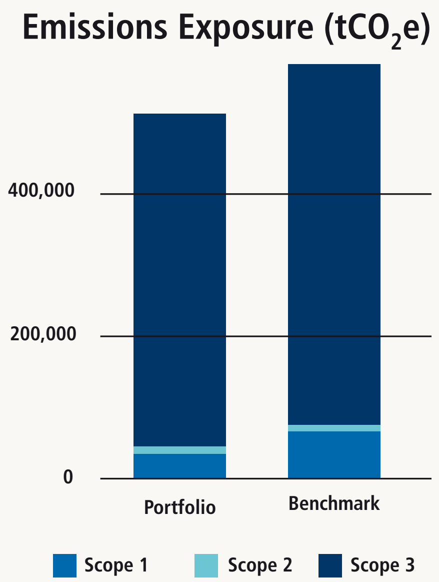


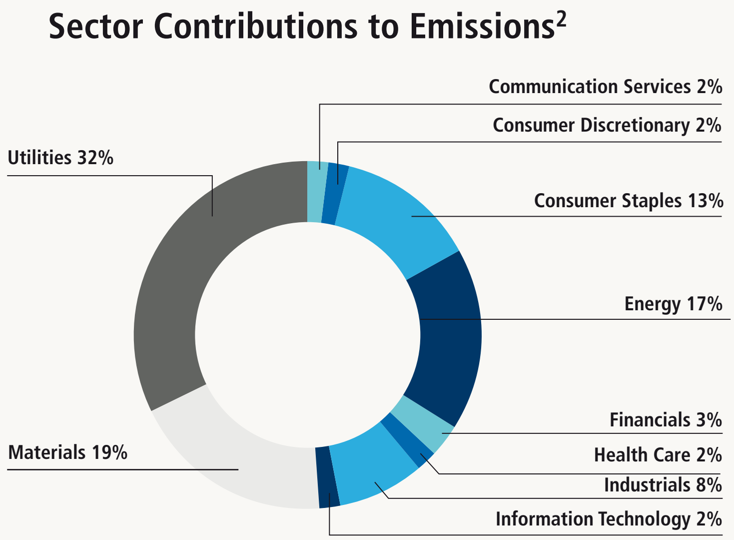


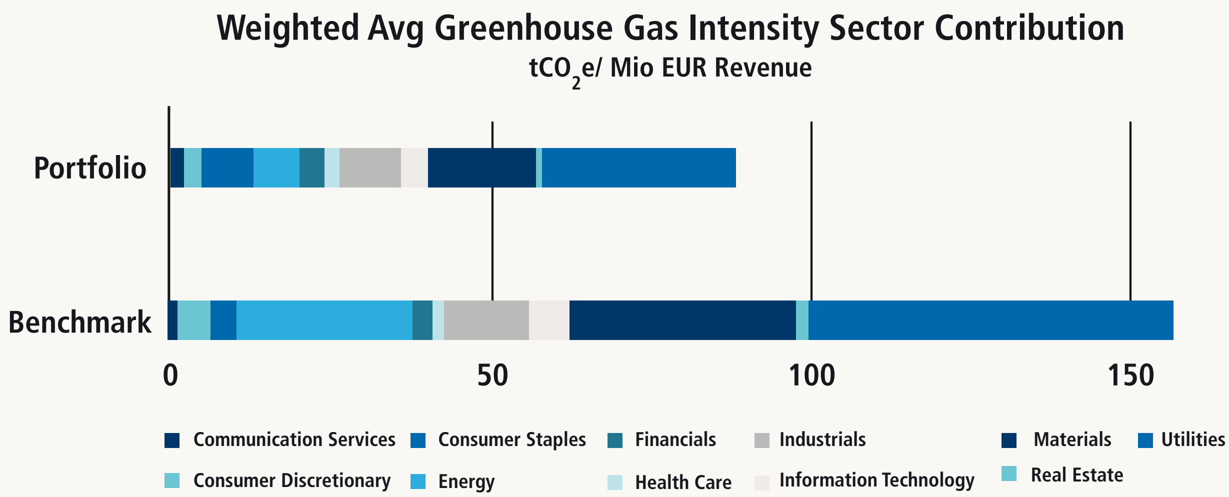
Progress since 2017 largely due to (a) Fossil Fuel Divestment and (b) material emission reductions in some sectors such as materials and utilities in recent years.

Global Equity Portfolio as of 31 December 2022

Emission exposure and intensity analysis







[1] Note: Carbon Risk Rating data is current as of the data of report generation.
[2] Emissions contribution for all other portfolio sectors is less than 1%for each sector.

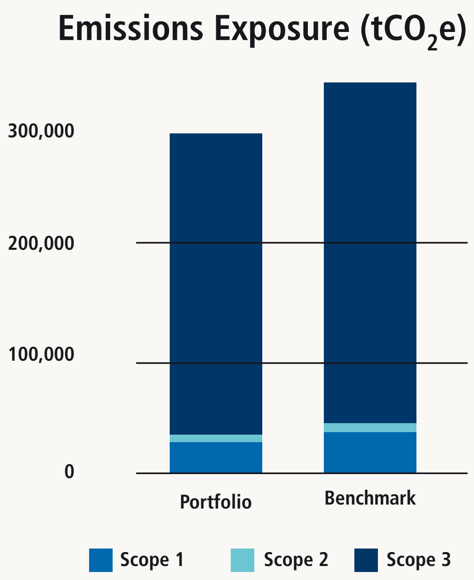
Data sourced from the Dec 2022 NTMA Debt Climate Impact Assessment Report produced by ISS ESG.

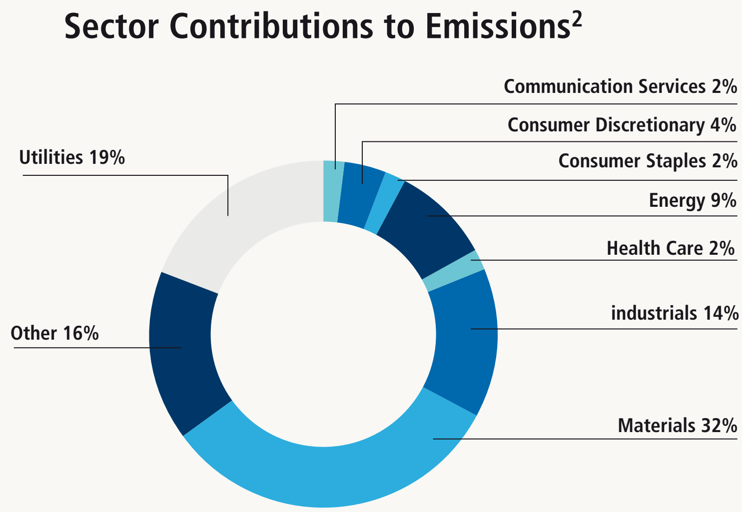
The benchmark for the Equity Portfolio is the iShares MSCI ACWI ETF.

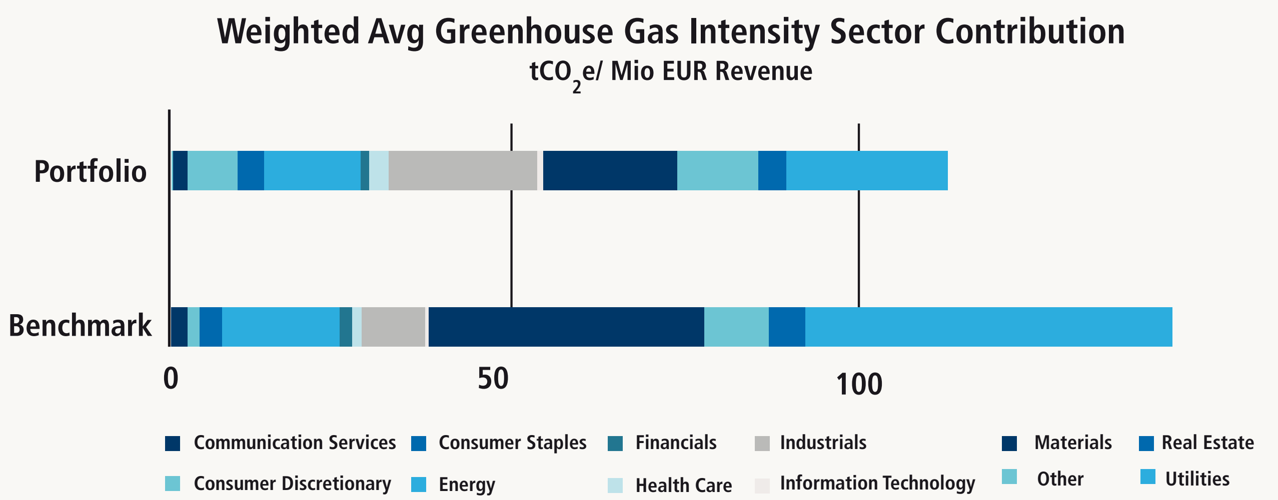
Emissions contributions for all other Portfolio sectors is less than 1% for each sector.

Global Bond Portfolio as of 31 December 2022

Emission exposure and intensity analysis







[1] Note: Carbon Risk Rating data is current as of the data of report generation.
[2] Emissions contribution for all other portfolio sectors is less than 1%for each sector.

Data sourced from the Dec 2022 NTMA Debt Climate Impact Assessment Report produced by ISS ESG.

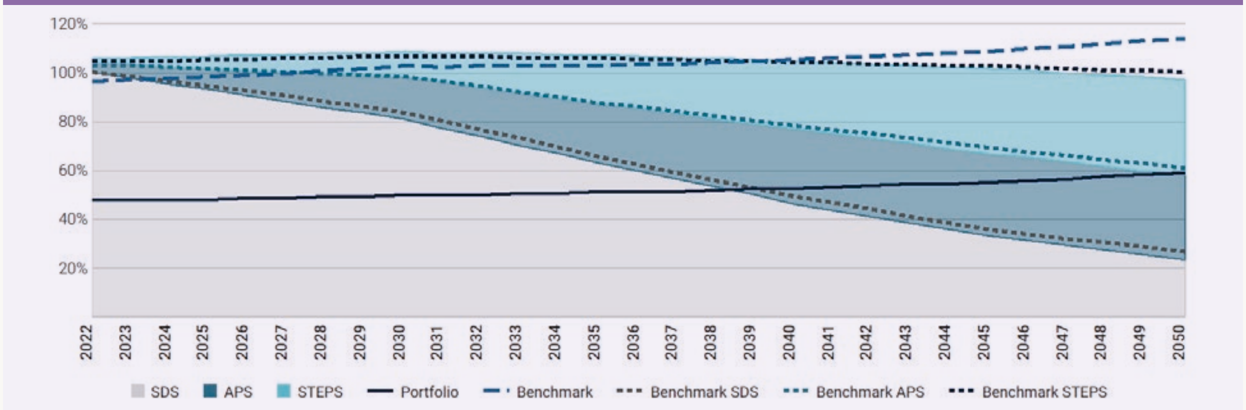
The benchmark for the Bond Portfolio is the iBoxx Euro Corporate Overall Total Return Index.

Emissions contributions for all other Portfolio sectors is less than 1% for each sector.

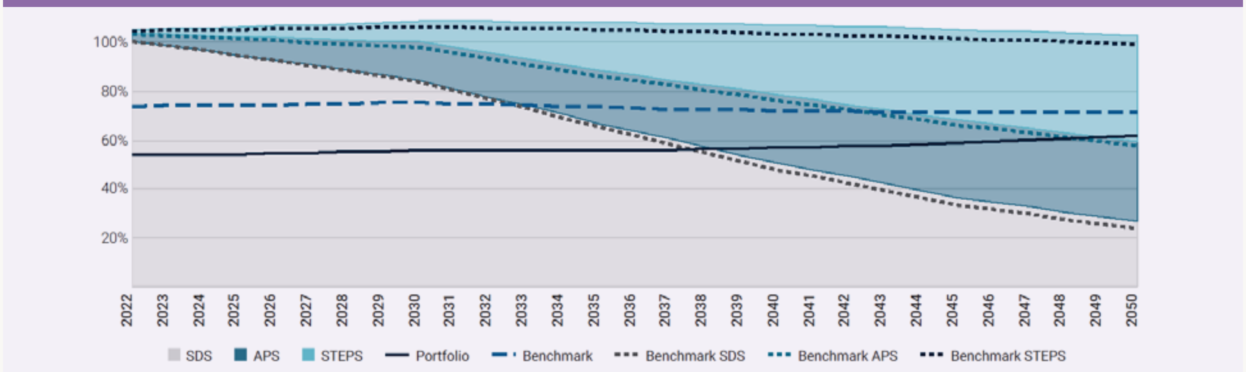
Modelling Forward Looking Climate Risk with Scenario Analysis

ISIF's Global Portfolio transition risk is significantly lower than broad market, but not yet aligned with its 2050 emissions budget.

Equity Portfolio Emission Pathway vs. Climate Scenarios



Corporate Bond Portfolio Emission Pathway vs. Climate Scenarios



The scenario alignment analysis compares current and future Portfolio greenhouse gas emissions with the carbon budgets for three scenarios: IEA Sustainable Development Scenario (SDS) describes the evolution of the energy sector required to reach the key goals of the UN, in line with the Paris Agreement. Stated Policies Scenario (STEPS) represents a path based on the energy and climate measures governments have put in place to date. Announced Pledges Scenario (APS) aims to show to what extent the announced ambitions and targets are on the path to achieve net zero by 2050.

Performance is shown as the percentage of assigned budget used by the Portfolio and Benchmark. For its Climate Scenario Analysis, ISIF use the iShares MSCI ACWI ETF for equities and the iBoxx Euro Corporate Overall Total Return Index for bonds.

Climate Metrics within the global portfolio have been impacted by a combination of structural changes within the Global Portfolio as part of a Strategic review and analytical methodological updates as the Industry continuously improves its climate analytic capabilities.

ISIF Equity Portfolio remains within its SDS emissions budget until 2039, with a potential temperature increase of 2.1° C by 2050.

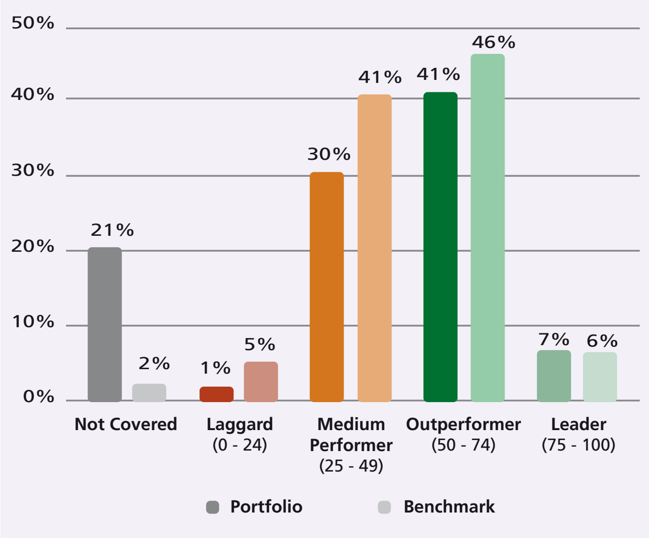
The Corporate Bond Portfolio remains within its SDS emissions budget until 2039, with a potential temperature increase of 2.1°C by 2050.

TCFD recommend assessing the resilience of the organisation's strategy by taking into consideration different climate-related scenarios, including a 2°C or lower scenario. The Global Portfolio's current strategy demonstrates a high degree of climate resilience and ISIF is committed to it's continuous improvement.

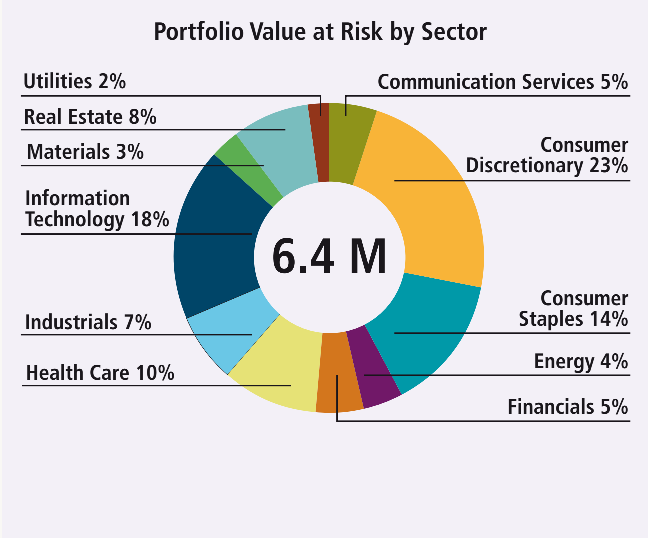
Transition and Physical Risk Analysis

Forward looking climate risk analysis

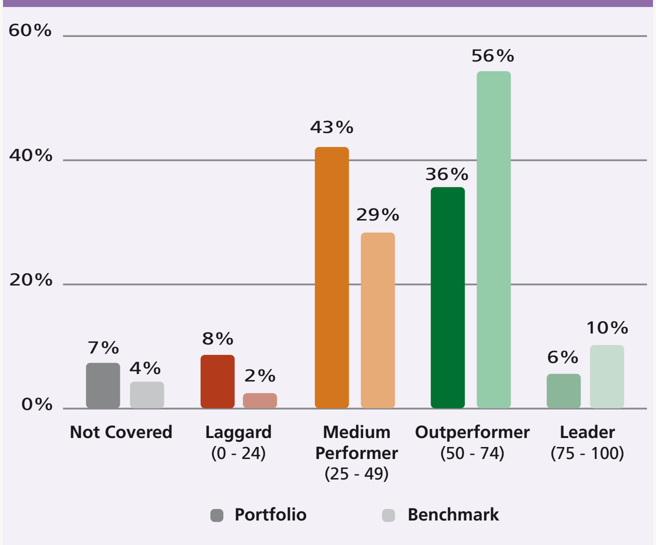
Global Equity Portfolio Carbon Risk Rating



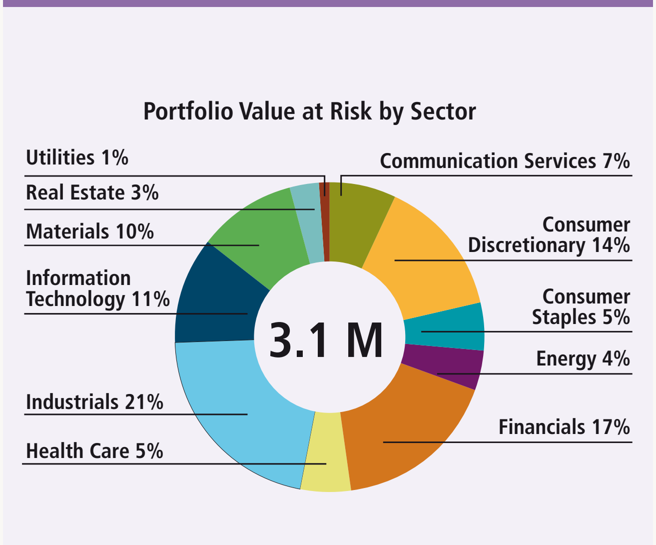
Global Equity Portfolio Physical Risk



Global Bond Portfolio Carbon Risk Rating



Global Bond Portfolio Physical Risk



The Carbon Risk Rating quantifies the company's exposure and management of material carbon issues in its own operations as well as its products and services.

It provides insights into how issuers are prepared for a transition to a low carbon economy and is a central instrument for the forward-looking analysis of carbon-related risks at portfolio and issuer level.

Physical climate risk may affect the value of a company and a portfolio. The charts quantifies the potential financial implications on a sector level.

Such financial implications from physical effects of climate change can be addressed by adopting appropriate risk management strategies.

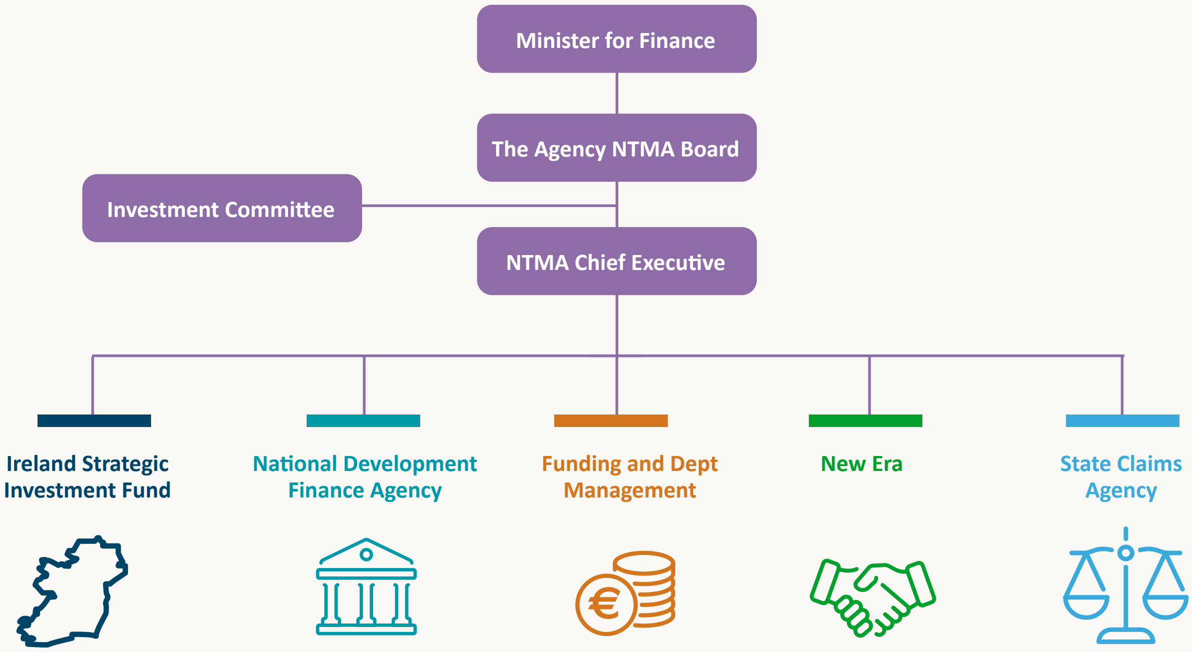
Appendix

About Us – Ireland strategic Investment Fund

Carbon Metrics

About Us – Ireland Strategic Investment Fund (ISIF)

The NTMA controls and manages the Ireland Strategic Investment Fund (ISIF), which has a statutory mandate to invest on a commercial basis in a manner designed to support economic activity and employment in the State.



The Ireland Strategic Investment Fund is a sovereign development fund with a unique mandate. ISIF's mandate is to invest on a commercial basis in a manner designed to support economic activity and employment in Ireland. Its predecessor was the National Pensions Reserve Fund (NPRF). The Fund is a strategic investor with strong connections in both the public and private sectors. The Fund is uniquely positioned to make connections and drive innovation across multiple industry players developing and delivering innovative opportunities that might otherwise go unrealised.

ISIF is comprised of the Discretionary portfolio and the Directed portfolio. The Discretionary portfolio has a "double bottom line" mandate to invest on a commercial basis in a manner designed to support economic activity and employment in Ireland. The Directed portfolio – primarily public policy investments in AIB Group plc (AIB) and Home Building Finance Ireland (HBFI) – continues to be held within ISIF under direction from the Minister for Finance.

ISIF prioritises the use of its capital and resources to address strategic challenges. ISIF focuses on transformational investments across its impact themes of Climate, Housing and Enabling Investments, Indigenous Businesses, and Food and Agriculture. In addition, ISIF can invest in National and Compelling investments in response to future macro events.

Carbon Metrics

What Are GHG Emissions and How Does ISIF Measure Them?

Green House Gas (GHG) emissions are converted to a carbon equivalent and expressed as tCO_2e. When ISIF use the word "carbon" or "emissions" ISIF mean all GHG emissions (tCO_2e).

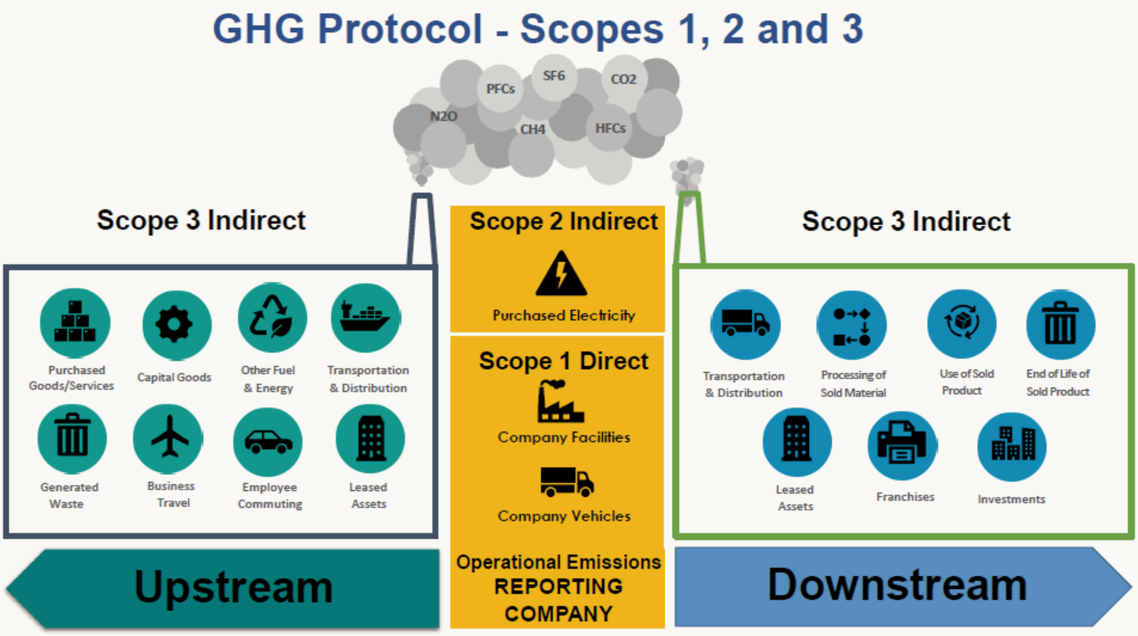


Image Source: © Clearstream Solutions 2022

Irish Portfolio: measures Scope 1, Scope 2 and upstream Scope 3 emissions.
Global Portfolio: measures Scope 1, 2 and Scope 3 – For reporting purposes Scope 1 and 2 emissions are disclosed.

Scope 1 and Scope 2 emissions are the primary emissions reported by businesses. These are direct emissions from owned or controlled sources, like company vehicles and facilities, and indirect emissions from generation of purchased energy.

However, there is increased acknowledgement that the majority of a company's footprint is actually in its supply chain and / or in how its product is distributed and used (Scope 3).

Best practice is to try and also measure Scope 3 emissions.

Note: Description of GHG Emissions Scopes are as per the GHG protocol guidance https://ghgprotocol.org/

The Question Determines the Appropriate Carbon Metric

There are different ways of measuring carbon risk within portfolios.

Question	Metric	Description	ISIF Formula
What is my portfolio's total carbon footprint?	Total Carbon Emissions	The Absolute GHG emissions associated with each company within a portfolio expressed in tons CO_2e.	• (Sector GHG Intensity x Investee Revenue)
What part of my portfolio's carbon footprint do I "own"?	Attributed Carbon Emissions	The sum of the proportional amounts of each investee company's emissions "owned"(equity share) expressed in absolute terms or tons CO_2e/€M invested.	• (Absolute Emissions x % of Equity invested by ISIF)
How efficient is my portfolio in terms of total emission per unit of output?	Carbon Intensity	Volume of carbon emissions per million euros revenue expressed in tons CO_2e/€M revenue. It is a relative metric used to compare company emissions across industries.	• (Sector GHG emissions/€m revenue)
What is my portfolio exposure to carbon intensive companies?	Weighted Average Carbon Intensity (WACI)	Portfolio exposure to carbon-intensive companies expressed in tons CO_2e/€M revenue	• (Sector GHG emissions/€m revenue) x (% of Portfolio)

ISIF adopts each of these metrics across the Global and/or Irish Portfolio's as appropriate to the investment type.

For further information please refer to www.isif.ie

Gníomhaireacht Bainistíochta an Chisteáin Náisiúnta
National Treasury Management Agency

Ciste Infheistíochta Straitéisí d'Éirinn
Ireland Strategic Investment Fund